Cigarette-Smoking. See page 265.
The Marriage of Near Kin. See page 272.

HEALTH

A WEEKLY JOURNAL OF

DOMESTIC AND SANITARY SCIENCE.

"Reason's whole pleasure—all the joys of sense—
Lie in three words, HEALTH, PEACE, and COMPETENCE."—*Pope.*

EDITED BY DR. ANDREW WILSON, F.R.S.E. &C.

VOL. XII.—No. 303. FRIDAY, JANUARY 25, 1889. [PRICE TWOPENCE.

SCHWEITZER'S

COCOATINA.

GUARANTEED PURE SOLUBLE COCOA.

This Old-Established Article retains its position as "the finest Cocoa in the Market." It is unequalled in purity and flavour, and is very Economical. It will bear the strictest Chemical test, and keeps for years in all Climates.

45, FARRINGDON-STREET, LONDON, E.C.

THE PERFECT WATER FILTER
(HOWIE'S PATENT.)

CHEAP! EFFECTIVE!! AND EASILY CLEANED!!!

This Filter ceases to act when soiled, thus compelling people to clean it, which anyone can do in a few minutes; it is therefore

A SAFETY FILTER,

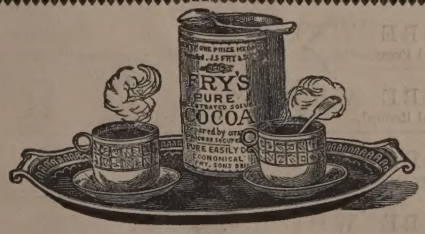
and not a delusion, as most Filters soon come to be.

J. & R. HOWIE, Hurlford, Kilmarnock, N.B.

Filters may be had at 15, GARLICK-HILL, LONDON, E.C. Wholesale Agents Wanted in Districts where none have been appointed.

GENERAL NURSING INSTITUTE,
5 & 4, HENRIETTA-STREET
COVENT GARDEN, LONDON, W.C.
Established 1862.
Solely under Medical Direction.
HOSPITAL TRAINED NURSES for every description of disease—MEDICAL, SURGICAL, MENTAL, and MIDWIFERY—can be obtained at this Institute on application to the Secretary or Lady Superintendent at a moment's notice, being resident in the Home.
MALE ATTENDANTS and NURSES specially for FEVER cases.
Telegraphic Address—
"NURSING INSTITUTE, LONDON."

Fry's



TRADE MARK.

PURE
CONCENTRATED
SOLUBLE

Cocoa

HALF A TEASPOONFUL IS SUFFICIENT TO MAKE A CUP OF MOST DELICIOUS COCOA.

Sir CHARLES A. CAMERON, M.D.—"I have never tasted Cocoa that I like so well. It is especially adapted to those whose digestive organs are weak, and I strongly recommend it as a substitute for tea for young persons."

W. H. R. STANLEY, M.D.—"I consider it a very rich, delicious Cocoa. It is highly concentrated, and therefore economical as a family food. It is the drink *par excellence* for children, and gives no trouble in making."

TO SECURE THIS ARTICLE, ASK FOR "FRY'S PURE CONCENTRATED COCOA."

38 PRIZE MEDALS AWARDED TO J. S. FRY & SONS, BRISTOL, LONDON, and SYDNEY.

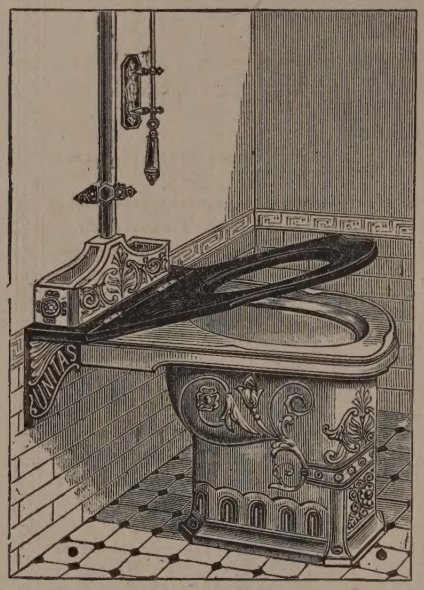
Nos. 1-156 (excepting Nos. 38 and 39) may still be had, Price 4d. each. Nos. 157 to date price 2d. each.

Indexes to Vols. II., VI., VII., VIII., IX., X., XI., can be had, price 2d. each.

BOSTON MEDICAL LIBRARY IN THE FRANCIS COUNTWAY

THE PERFECTION OF CLEANLINESS, UTILITY, AND SIMPLICITY.

TWYFORD'S 'UNITAS,'



COMBINING

W.C. BASIN AND TRAP, URINAL AND SLOP SINK.

No Wood Fittings are required except a hinged seat, which, being raised, the Basin can be used as a Urinal or a Slop Sink, the "wetting," so objectionable in Closets having permanent seats being avoided. Free access can thus be had to all parts of the Basin and Trap, so that everything about the Closet can be easily kept clean.

Made in Fine Earthenware, Plain or Decorated, and in Strong Fire Clay.

The flushing arrangements are so perfect that with a flush of two gallons of water, it is guaranteed that all the soil and paper will be completely removed from the Basin and through the Trap, the whole of the inside being thoroughly washed, and with the aid of the Patent "After Flush" Chamber, the full quantity of water required to receive the soil is left in the bottom of the Basin.

For Prices and Catalogues apply to TWYFORD, HANLEY, STAFFORDSHIRE.

THE ENCORE WHISKY.
Lancet.—"Wholesome and pleasant."

THE ENCORE WHISKY.
British Medical Journal.—"A safe stimulant."

THE ENCORE WHISKY.
Medical Times.—"Very wholesome. May be safely used."

THE ENCORE WHISKY.
Medical Press.—"Invaluable as an alcoholic stimulant."

THE ENCORE WHISKY.
Medical Record.—"The purest of alcoholic stimulants.

THE ENCORE WHISKY.
Sanitary Record.—"An excellent 'dietetic' stimulant."

THE ENCORE WHISKY.
Practitioner.—"A safe stimulant."

THE ENCORE WHISKY.
Food Reformer.—"All who value health should use it."

THE ENCORE WHISKY.
Dr. Bartlett.—"Purest whisky I ever examined."

THE ENCORE WHISKY.
Dr. Paul.—"Free from all injurious substance.

THE ENCORE WHISKY.
Dr. Tichborne.—"Wholly free from all impurities."

THE ENCORE WHISKY.
Dr. Macadam.—"Very wholesome and fine quality."

Sold Everywhere.
BERNARD & CO., LEITH DISTILLERY, SCOTLAND.
Wholesale Depôt—THREE CROWN-SQUARE, BOROUGH, S.E.

PITKEATHLY.

EXTRACT FROM A SERMON BY THE REV. DR. TALMAGE, ON SEPTEMBER 25th:—

The invalid proprietress of a wealthy estate in Scotland visited the Continent of Europe to get rid of her maladies, and she went to Baden-Baden and tried those waters, and went to Carlsbad and tried those waters, and went to Homburg and tried those waters, and instead of getting better she got worse, and in despair she said to a physician, "What shall I do?" His reply was: "Medicine can do nothing for you; you have only one chance, in the waters of Pitkeathly, Scotland." "Is it possible?" she replied. "Why those waters are on my own estate!" She immediately returned, and drank of the fountain at her own gate, and in two months completely recovered.

To be had of all Wine Merchants and Chemists.

REID & DONALD, Perth, Proprietors.

LONDON AGENTS:
MESSRS. W. BEST & SONS, 22, HENRIETTA-STREET, W.

REMINGTON
STANDARD TYPEWRITER.

STILL AHEAD!

SPEED CONTESTS.

CINCINNATI, July 25—Highest Speed on Legal Testimony.

NEW YORK, August 1—**First, Second, Third, and Fourth Prizes** on Business Correspondence.

TORONTO, August 13 (Tournament for CHAMPIONSHIP of the WORLD).

GOLD AND SILVER MEDALS for Highest Speed ever recorded on Business Correspondence and Legal Testimony—99 Words per Minute, excluding errors.

SOLE PROPRIETORS AND MANUFACTURERS—

WYCKOFF, SEAMANS, & BENEDICT,
100, GRACECHURCH-STREET, E.C.

◆ HEALTH ◆

EDITED BY

DR. ANDREW WILSON, F.R.S.E., &c.

LONDON: *FRIDAY, JANUARY* 25, 1889.

CONTENTS OF No. 303.

PAGE
Notes by the Way: By the Editor. 261
Original Essays:—
The Morals of Health. By M.D. 262
The Chemistry of the House. By Dr. Drinkwater, F.C.S. Sixteenth Paper 264
Personal Health:—
Fatal Results of Improper Feeding 265
Cigarette-Smoking 265
The Business of Life 266
Public Health:—
Papers on Burial and Cremation. IV.—Burial Reform. By J. N. Parker 267
Eels in Water-Mains 268
Popular Science Papers:—
A Possible Revolution in Medicine. By Dr. Austin Flint .. 269
The Family Circle:—
Lung-Expansion and Consumption 271
Jottings from the Journals:—
Rickets and Sanitation—Quaint Cures—The Marriage of Near Kin 272
Sanitary Appliances:—
A Revolution in Boot-Making—Colquhoun's Scotch Tweeds—Doig's "Septicide" 273-74
Our Letter Box:—
Rules for Correspondents 274
Queries and Answers:—Replies: General, Sanitary, and Medical 274

Notes by the Way

BY THE EDITOR.

"Health is the foundation of all our physical happiness."—*Herder.*

A "SYMPOSIUM" on the subject of chilblains has recently been given in a medical contemporary. One medical man advises that the following liniment should be used: Methylated chloroform, two ounces; cocaine hydrochlorate, eight grains; compound camphor liniment, three ounces; liniment of soap, five ounces; mix, and use night and morning. Another correspondent writes that, as dampness of feet in cold weather is an exciting cause of chilblains, one very important point is to be extravagant in hose. The socks or stockings should be made of some woollen material, and I think it better not to have them very thick. They must always be thoroughly dry when put on, and they should be changed as soon as they become damp, either from perspiration or from moisture coming through the boots. For this reason the socks should be changed immediately after taking exercise, and the same boots should not be put on again unless they are quite dry. The same pair of socks should not be worn for two consecutive days, but each pair should be washed, or, at least, thoroughly dried, before being worn a second time. On no account are the socks to be allowed to dry on the feet, and the practice of putting the feet before the fire is to be condemned.

"I find," adds this writer, "that chilblains are most prevalent when the weather is both cold and damp. It is in just such weather that many people eat more food and take less exercise than usual, thereby inducing indigestion, congestion of the portal system, constipation, &c., which, in their turn, lead to the development of chilblains. It is important, therefore, to insist upon regular exercise and a moderate diet, and to sedulously prevent constipation. For the immediate relief of itching, nothing is better than soaking in hot water. Iodine is the best external application. It should be applied,—either as ointment or tincture of twice the ordinary strength,—once or twice a day as long as the skin remains swollen and red."

✣ ✣ ✣

A THIRD correspondent says that if the patient will have them painted with equal parts of compound tincture of iodine and collodion, three or four times, considerable benefit will be derived. A fourth doctor says that for some winters past he has used only "anodyne colloid" for this troublesome complaint, and invariably with success. It is, he believes, prepared by various chemists; that which he uses being made by Gale & Co. It should be applied freely on the first sign of swelling or irritation. These hints will be useful to many of my readers in the chilblain-season.

✣ ✣ ✣

DR. T. SPASSKI, District Medical Officer of Ijibski, in Russia, says a contemporary, a locality where there is a large firearm manufactory, has published some elaborate observations on the effects of the various kinds of work on the *employés*. He found two classes of disease especially prevalent, — intermittent fever and chest affections, especially phthisis. The first class constituted 18 per cent. of the total sickness, and the second 12 per cent. It was also noticeable that fever occurred principally among the women, and phthisis chiefly amongst the men. Plans and elevations are given by Dr. Spasski, which show that the workshops are raised above the level of the ground, which is damp and malarious. The men working in them are, therefore, less subjected than their wives, who remain at home in damp cottages, to malarial influences; while, on the other hand, they are exposed by the nature of their employments to other affections, arising chiefly from the cramped positions of the body, and from the dust and small particles which necessarily fly about in the immediate neighbourhood of their work.

"THE TASTELESS APERIENT."

HUNGARIAN NATURAL MINERAL WATER.

The Salts of ÆSCULAP contain 90 per cent. of purgatives.

Æsculap

HIGHEST AWARD
AT THE
INTERNATIONAL MEDICAL EXHIBITION, London, 1881.

"This Water contains the SULPHATES OF MAGNESIUM AND SODIUM in unusually large quantities. IT IS AN ADMIRABLE APERIENT WATER—one of the most powerful, indeed, that we have examined, and may be used with perfect confidence."—THE LANCET, *Sept. 26th*, 1885.

SOLE AGENTS:
INGRAM & ROYLE, London, Liverpool, & Bristol.
AND OF ALL CHEMISTS.

MORE than one-third of the operatives suffered from bronchial catarrh, and 14·8 per cent. from phthisis. Amongst this latter class of cases, those who worked amongst dust were affected twice as much as those who were engaged in more cleanly occupations, the metal and mineral dust proving much more hurtful than wood dust. Those who worked with the file and at the grindstone were especially affected. The author presents charts showing the effect of the different kinds of work on the stature and chest-measurement of the workmen. The chest seems to be especially narrow and small amongst the locksmiths, who have much filing, the average difference at various ages between their chest-measurement and that of the firemen being about three millimètres.

✪ ✪ ✪

THE feat of transcribing the *Iliad* in characters so minute as to admit of its being enclosed in a nutshell has just been surpassed by an *employé* in a paper manufactory at Podgora. This man, Cassovel by name, has written on one ordinary sheet of paper the entire "Divina Commedia" of Dante,—a poem consisting of 14,233 verses, 96,000 words, and 400,000 letters. His transcript is quite legible under a strong magnifying glass, and is at present on view at Naples. Cassovel, whose eyesight has as yet betrayed no sign of impairment from the strain he has put it to, worked with the quill,—the writing implement with which the Benedictine monks in the Middle Ages reproduced the manuscripts but for which so much of the ancient literature, sacred and profane, would have been lost to posterity.

✪ ✪ ✪

I OBSERVE that the Lafarge Tontine, which was formed in 1791, affords a curious illustration of the truth of the saying that annuitants live long. The last subscriber has only just died. Originally, there were 116,000 subscribers, and the amount thus obtained was 59,000,000 francs. The dividends of those who died were to increase those of the survivors up to 3,000 francs per share; a limit extended in 1809 to 6,000 francs. The surplus was to go to the State, one object of the tontine being to reduce the national debt. In 1886 there were seventeen survivors, holding 162 shares. Twenty of the shareholders were centenarians, and one reached the age of 106. Among the deaths registered in England and Wales in 1887 were sixty of reputed centenarians—thirteen men and forty-seven women. In the three preceding years the numbers had been fifty-eight, sixty-three, and seventy-one respectively. Thirty-two are said to have reached 100 years, ten 101, and two 106 years; and two women are said to have been 107 and 109 respectively.

✪ ✪ ✪

THE practice of cremation grows in favour on the Continent. At Zurich, where a new crematorium has just been finished, the whole cost of construction was only £1,300, and the charge per corpse for complete incineration is only 40s. a head. It used to be £6. The Zurich crematorium stands in a corner of the central cemetery, and is surrounded by edifices of an artistic character for storing the urns containing the ashes of the dead.

✪ ✪ ✪

THE smoke-cloud which daily hangs over London is estimated by Professor Chandler Roberts to contain about fifty tons of solid carbon and 250 tons of carbon in gaseous combinations. The expense of this waste of coal is calcu- at $13,000,000 a year, while the smoky atmosphere causes damage to property, which Edwin Chadwick places at $10,000,000 a year.

Original Essays

"Life is not to live, but to be well."—*Martial.*

THE MORALS OF HEALTH.

BY M.D.

THE phrases "morals" and "ethics" are usually associated in the minds of many persons with matters which, in the higher affairs of life, are believed to regulate our conduct towards our neighbours and towards those who are in any way connected with us in the family circle, in business, and in the thousand-and-one relationships which civilized life entails. Doubtless, this is a fair enough view of the aim of morals. In the sense that "conduct is creed," if not often more than creed, so morals, interpreted, in turn, to mean conduct, may be said to show forth the true way of life and happiness. This much all admit. It becomes, however, a more complex question when we have to consider how far, if at all, morals (*i.e.*, conduct) are related to religion. By some thinkers the two ideas are utterly dissociated; by others they are as closely interwoven.

Leaving the disputants on this phase of the question to fight out their battles, there remains a view of morals which, in relation to health, deserves continual ventilation. Health, and the striving after physical welfare, seems to me largely a matter of the highest morality the world has ever witnessed. I am not afraid to say that the conscientious seeking after a high standard of bodily health and physical well-being is, probably excelled in its effects upon one's self and one's neighbours alike, by no other phase of ethical development. On the contrary, neglect of the considerations which the science of health entails, is fraught with consequences such as we are certainly warranted in associating with the worst fruits of immorality and with the most flagrant breaches of the moral law.

I am not here concerned in any sense with the origin of morals. That topic is far too complex and wide to admit of discussion in the present instance. I may simply premise that mankind has discovered, intuitively or by experience, that to follow right because it is right, is "wisdom in the scorn of consequence," as the Laureate puts it. It may have been that what is right and what is wrong are points which are susceptible of very varying definitions, according to the standpoint from which we argue,—or even according to the particular matters we argue about. Be that as it may, we may safely agree to admit that, somehow or other, civilized men have come to think that it is wrong to steal and wrong to kill; and that it is good to forgive injuries, to assist the distressed, and to practise honesty on all and every occasion. Possibly, man has found out, also, that it is best for him, as an individual, that such moral laws should be observed than that they should be neglected; and what is best for the individual, through a very natural development of ideas and practice, has become best for the nation at large. If, as is likely, morals have grown and been evolved, it is not difficult to account for the reason of the evolution. There are low codes of morals and high codes existent around us to-day; and the very fact of our perceiving the difference between the ethics of one individual, or between those of one nation and another, is itself a tacit proof that morals, like other aspirations of humanity, have grown from "more to more," and are capable, let us hope, of higher things in the way of evolution than have yet met our waiting eyes.

In the pursuit of health, then, I hold, there is essentially exhibited a high development of the best morality. There is no lack of illustration of this proposition. First of all, it is certain that if, by following out every law of health and by securing the physical well-being of myself and my family, I prolong the lives of my home-circle, it is clear, however selfish the attitude may appear at first sight, I am acting up to a high code of morals. Let alone the fact that I am, by this course of right conduct, guarding my friends and myself from risk of disease and death, it can easily be shown that this labour really involves the practice of what is called "altruism,"—that is, the care of and thought for others. The less disease my household suffers from, the less chance will there be of my infecting my neighbour. The healthier I maintain myself, the better able will I be to discharge every duty of citizenship, every piece of work which comes to be performed, every action of life whereby I may benefit others. Allow that I am benefiting myself, and that "egoism," or self-preservation, lies at the basis of my actions, then I maintain this selfishness is, at the best, a healthy phase of life. Through it, my neighbours must certainly be the gainers, as I have shown. The argument may be fairly advanced, indeed, that if such egoism is to be objected to in this one case, it will be hard, if not impossible, to discover any action whatever, however disinterested in character it may appear, into which this idea of selfishness does not enter. Even the pleasure we experience at the performance of a good or kind action, might, by the same reasoning, be brought under the ban of selfishness, as illustrating the mainspring of morals.

Neglect of health-laws and practice can, on the reverse side of things, be shown to be fraught with the most immoral results to human welfare. It is wrong to kill: but there are forms of homicide which, to my mind, are just as immoral in nature as is the act of an infuriated murderer. People know that small-pox and scarlet fever and typhus fever are all dangerous and infectious diseases. Yet, in many cases, for the details of which I may refer my readers to the daily journals, these diseases are spread from the sick to the healthy by the sheer ignorance or carelessness of those who have charge of patients. It may be that it is wrong to speak of such actions as immoral. Perhaps the phrase "unmoral,"—that is, destitute of morals entirely,—might better describe the case of the ignorant person who spreads death broadcast by want of care in a fever case, by the neglect of vaccination, by the absence of disinfection, or by any other neglect of duty. Be that as it may, the action which brings disease and death to others, whether arising from wilful breaking of the laws of health, or from "unmoral" ignorance thereof, has for its result all that immorality, in this sense, can produce. The respect we should have to our neighbour's life and safety in such a case is entirely neglected. We expose him and his to deadly risk; and in so doing we violate one of the most primary laws of ethics which the world has learned to recognize.

Going still further into this moral relation of health, one may hold that the neglect to obtain the knowledge which is to keep us well and healthy is in itself a piece of immorality. Ignorance of the law excuses no man from the consequences of infringing the law; and if this is an accepted axiom of legislation, its parallel, as applied to health viewed from the moral, is not difficult to find. There are neglects of duty which are as noxious as actual violations of duty. Sins of omission are often as virulent in their effects as are those of commission. "Evil is wrought by want of thought, as well as by want of heart," says Tom Hood, and the negative immorality of the ignorance of health becomes converted into positive immorality when our duty has been pointed out to us in this matter, and when we have failed to act up to the standard of that duty.

Through all the phases of life runs unbrokenly this great moral law, that our neighbour's interests shall be made identical with our own. There is no escape from its precepts or from its far-reaching tenets. Society, in this sense, becomes bound together in an inter-dependence which more clearly than other phases of life shows the brotherhood of man. The dairyman, by one infringement of health-laws, in respect of infectious disease in his household, may send death into hundreds of families. The plumber or builder who "scamps" drains, and allows a house to be inhabited which is permeated by sewer-air, opens up an easy road to the Valley of the Shadow. The truth is that, in this matter of health, we are all dependent one on another. From the grocer's shop to the druggist's store, from the dairy to the dressmaker, from the plumber to the doctor himself, society is bound, as far as its health is concerned, in the golden chains of a morality the due observance of which preserves for us all that is best and sweetest in life,—the enjoyment of existence, and the possibilities of attaining to all things in the way of mental advance.

The personal relations, in their most intimate sense, are not left unaffected by the morality of health. How important the axiom that no person, under any circumstances whatever, is justified in imparting even the slightest disease to another; yet, as medical men know only too well, how often is this axiom wilfully disregarded. The spread and existence of many serious diseases are only to be accounted for by the woeful neglect of this moral adage. What are we to say, also, of the morality which sees nothing wrong in the mating of persons of consumptive, syphilitic, scrofulous, or insane tendencies? Yet, that such unions occur every day, in face of medical prohibition of earnest kind, is an undeniable fact. People will marry, and be given in marriage, despite all that physicians and friends may say; and the affairs of the heart, we are told, refuse to be governed by the bare laws of hygienic science. Yes, one may add, and with results of a kind that shorten life, that bring inherited disease on the offspring of such marriages, and that entail untold suffering on thousands of innocent and irresponsible persons. Looking to the results of such infringement of health-laws, one may, with Tennyson, exclaim of such diseased stock, wilfully propagated, that, for them, "'twere better not to be."

The great difficulty that awaits us in this matter of the morals of health, is the impressing of the people with the idea that health is not a matter of chance, but of rigid, unvarying law. Once succeed in making this fact the property of the people's intelligence, and the rest will be easy. The morality of health really involves the exercise of self-denial manifested in a thousand fashions; and its pursuit demands the many personal sacrifices of which religion (of the best type) perpetually speaks in praise.

A HUMANE TELEPHONE.—People who suffer from deafness and noises in the head will be glad to hear that an eminent Aural Specialist, of London, has hit upon a cure which is said to be absolutely efficacious, and may be applied at the patient's home. It is a miniature telephone, which fits inside the ear. It is not only a producer of sound, but also a cure for the distressing noises in the head. Being comfortable to wear, it will, no doubt, be a boon to mankind. A pamphlet describing its construction is printed, and may be had from the Publisher, 21, Bedford-square, London, W.C. Price 3d.—[ADVT.]

There is nothing new in the argument that health is a matter which should be "understanded of the people," but there is something new, for many minds at least, in the idea that to get health-knowledge is one of the highest pieces of morality which can be practised. In truth, there can be no thoroughly healthy life which is not also, in virtue of its striving after physical well-being, a moral life. Happy the nation, and equally happy the individual, whose morals are founded on an appreciation of this fact, and whose duty to self becomes in this way elevated into a duty done towards all men.

THE CHEMISTRY OF THE HOUSE.

By Dr. Drinkwater, F.C.S., &c.
Lecturer on Chemistry in the Edinburgh Medical School, &c.

SIXTEENTH PAPER.

THE CHEMISTRY OF A WASHING-DAY.

(Continued.)

Of late years, advertisements have made us familiar with the fact that a large number of laundries use no chemicals. It is doubtful if we could persuade any laundry-proprietor or manager to admit that such a substance as a chemical found an entrance into their premises; yet, on a little inquiry, we learn that the statement is only true in a popular sense, for both soap and carbonate of soda are important factors in the washing-tub, and that they are chemicals admits of no dispute. Recently, we have added another chemical to the list,—viz., paraffin oil,—and one which bids fair to ultimately play an important part in the chemistry of a washing day, not only in the public laundry, but also in the domestic washhouse.

I cannot unearth the name of the discoverer of this method of washing; for it came first under my notice from the correspondence columns of the *Scotsman*, in a letter signed "Materfamilias." Whoever "Materfamilias" may be, she has done her fellow housewives considerable service by making her discovery known. The paraffin system of cleansing clothes consist in steeping the clothes in soap and water over night, and then boiling them in a mixture consisting of a tablespoonful and a half of paraffin oil, nine gallons of water, and half a pound of soap, well rinsing in two changes of hot water, and hanging out to dry. No rubbing is required. The process must be conducted with care, or the washed linen may smell of paraffin. I may be told by some that they have tried it, that it has not answered; and they may urge various objections against its use. I am quite prepared for this. I never knew of any new discovery likely to benefit the housewife, or the servants under her charge, that did not meet with considerable opposition.

Sewing machines and washing machines, when first invented, were spoken of as dire delusions; but they have, somehow, managed to survive, and even to be desired by those who do not happen to be so fortunate as to possess such useful articles; and I have no doubt that the washerwoman of the future will sing the praises of paraffin oil, and wonder how the poor creatures of a past generation got through the washing without it. To be successful, the mixture with the clothes must be kept boiling; if it be allowed to go off the boil, the clothes will smell of the oil, then the proportions must be adhered to,—I find the tendency is to use too much oil,—and, lastly, the subsequent rinsings in hot water must be thorough. Used in this way, the process is one which saves an enormous amount of hard work in the matter of wringing and rubbing. The question naturally arises, How does it act? The answer is not easily given. Paraffin oil has the power of dissolving grease, and this power may be exerted to a small extent; but I am more inclined to the belief that the physical action of soap, alluded to in the last article, is increased by the paraffin oil, and this belief is backed up by the recent introduction of solid paraffin for the same purpose. This solid paraffin is now being extensively sold under various fancy names for use in laundries, and it seems to act as well, if not better, than the liquid so-called oil.

The next chemical we use is washing-soda, or carbonate of soda, as the chemist would term it; and this is of use for various reasons. In the first place it is an alkaline salt, and strongly alkaline, it therefore has the power of dissolving or saponifying greasy matters; and, in the second place, it softens hard water by precipitating the lime, thus rendering the soap more efficient. The manufacture of soda is one of the most important of our chemical industries, and, at the same time, has a most interesting history. Up to the year 1793, all the soda used in many industries was derived from sea-weed ash, which was known as *barilla*. The sea-weed was collected on the west coasts of Scotland and Ireland, and burnt to ash. All sea plants are rich in salts of soda; whilst land plants contain salts of potash. On burning these plants, the salts are left, and the soda and potash are in the form of carbonates.

Barilla, then, chiefly consisted of carbonate of soda, and the name is still handed down to us as the trade-mark of a particular kind of soap which is supposed to possess special advantages. The French Revolution altered many things in Europe, and amongst others it cut off the supply of barilla from France. This, of course, affected the French soap manufacturer, and a commission was appointed to inquire into the artificial methods of making carbonate of soda. The most favourable report was given on a process devised by Leblanc. Soda was made by this process in a subsidized manufactory near Paris; but the concern was not a financial success, and Leblanc applied to the English Government to aid him. His life, however, was an unfortunate one, his invention has been the means of enriching our own country, but it did very little good to his own land; and he, instead of deriving any good from his labours, died in a French asylum for paupers. It has been carried on in this country successfully for nearly a hundred years, but is now being gradually pushed aside to make way for an improved process of more recent date; but of this we shall say something presently.

Leblanc's process consists in taking common salt, acting on it with oil of vitriol, and converting it into sulphate of soda, technically known as *salt cake*. This is now heated with coal and limestone in a furnace, when the coal takes away the oxygen from the sulphate, leaving sulphide of soda; this is now acted upon by the limestone (carbonate of lime), when the acids and bases change places, producing what is known to chemists as double decomposition; and the result is a mixture of carbonate of soda and sulphide of lime. This mixture, from its appearance, is known as *black ash*.

Sea Water for Manchester and Salford.—We understand that the Blackpool Sea Water Company has made arrangements with the railway companies to supply sea water, in casks, to be delivered in Manchester and Salford. The water will be daily filtered on the shore, and be perfectly clean and pure.

Personal Health

"Be timely wise;
With health all taste of pleasure flies."—*Gay.*

FATAL RESULTS OF IMPROPER FEEDING.

A MORE common disease than people generally are aware of is ulceration of the stomach, which eats through the various layers, or walls, of this organ, till only a thin fabric of peritoneum, no thicker than tissue paper, is all that separates the cavity of the stomach from that of the abdomen. Under such circumstances, the victim's life hangs by something far more delicate than a silken cord, for the slightest indiscretion in eating or drinking may rupture the tissue-wall, allowing the stomach contents to escape into the abdominal cavity, and producing peritonitis and death. This is no fancy picture coloured by the imagination, but a natural statement of actual fact. Many a man with gastric ulcer knows he has dyspepsia, but does not know he has gastric ulceration. A common sign of it is pain after eating, relieved by vomiting, vomiting of dark-coloured blood, and the occasional passage of tarry motions. In this connection should be noted a custom of giving cow's milk in this disease. Cow's milk contains a cheesy casein, which in the stomach forms irritating, indigestible curds. These curds may irritate and inflame the whole organ, and produce rupture of the delicate wall to which we have referred. We count cow's milk as among the most dangerous aliments the victim of gastric ulcer can take.

Turning to peritonitis itself,—a disease not so very uncommon at this period of the year, and followed by a large mortality,—it is invariably noticed that the injestion of food, even slightly indigestible, causes aggravation of symptoms, and increases the pain and swelling of the abdomen. Still, the fuel of life must be supplied, if it can be without damage; and a popular supposition is that milk is perfectly safe; while in its indigestible curds, souring and irritating the intestinal canal, there lurks an evil which no pen can by any means overestimate.

Again, in typhoid fever, where an illness lasting weeks is the rule, and where judicious feeding is the main thing to be relied on, what is the condition of affairs? In this disease the intestine is largely ulcerated, and anything irritating which passes over the ulcerated surface tends to produce, on the one hand, hæmorrhage from the bowels, and, on the other hand, rupture, peritonitis, and death, after the same manner as in gastric ulcer.

No more important subject is encountered in medical study than infant-feeding, for improper infant-feeding brings in its wake a more sweeping mortality than any other known. The mucous membrane of an infant's stomach is among the most delicate of all animal tissues; and to pour into this organ, as is so commonly done, cow's milk, farinaceous foods, and innumerable tinned goods, is but to irritate and inflame it. The result, with few exceptions, is wasting, an old-man-like look, and, finally, dissolution.

It may be considered as among the greatest feats medical science has ever achieved, that the grandest food in the world, milk, has been deprived of its objectionable features; so that now any domestic can prepare cow's milk in a few minutes in such manner that it will prove bland, soothing, and nutritive in all conditions named. The change referred to is brought about by adding a Zymine Peptonizing Powder to a pint of milk. This predigests the cheesy casein, so that the milk can no longer form tough curds.

CIGARETTE-SMOKING.

THE poisonous effects of cigarette-smoking have been experimentally determined by William L. Dudley, M.D., professor of chemistry in the Vanderbilt University at Nashville.

The fact that cigarette-smoking produces physiological effects differing to some extent from those of the cigar led him to make his experiments. The frequently ascribed causes of the difference,—that of the adulteration of cigarette tobacco with opium and other drugs, and also the presence of arsenic in the paper,—are for many reasons unsatisfactory and insufficient. It is true, no doubt, that the tobacco in many of the less expensive brands is adulterated with cheap drugs and artificial flavours, and that in the more expensive grades opium may be used; but it is equally true that many cigarettes are made from tobacco which is free from sophistication.

The presence of arsenic in the paper is entirely out of the question. There is a difference in the methods of smoking a cigarette and a cigar or pipe. In the two last mentioned the smoke is simply drawn into the mouth and expelled directly therefrom or through the nose, while the experienced cigarette-smoker will inhale the smoke; that is, draw it to a greater or less extent into the air-passages, and in some cases to the greatest depth of the lungs, and thus the absorption of the carbonic oxide and other gases will take place very rapidly, causing more or less deoxidation of the blood, and thereby impairing its power to build up the wasting tissues of the body.

Acting upon this theory, Dr. Dudley proceeded to experiment on animals, and obtained for the purpose some mice. The animal to be experimented with was placed in a glass bell-jar, into which the smoke of a cigarette mixed with air could be drawn as rapidly as desired by means of a laboratory aspirator. In the first experiment the smoke was purified as much as possible; and the atmosphere breathed by the animal was practically oxygen, nitrogen, and carbonic oxide. The cigarette was loosely inserted in the end of a tube having two bulbs. These bulbs contained a solution of potassium hydrate to absorb the carbon dioxide and any acids or condensable bodies. A tube was provided containing solid potassium hydrate broken into small lumps, which retained any carbon dioxide that may have escaped the bulbs. The animal was placed in the bell-jar and the apparatus connected together. An aspirator was turned on so as to draw a slow current of air through the apparatus. The cigarette was then lighted, and in twenty-two minutes the animal was dead.

On examination of the blood of the animal by the spectroscope, it was found that all of the oxyhæmoglobin had been converted into carbonic-oxide-hæmoglobin, which showed that carbonic oxide was the cause of the death. This experiment was repeated, and the result was the same: the animal died in twenty-five minutes, and the spectroscope revealed the same condition of the blood.

A third experiment was made without the bulbs. The tube carrying the cigarette was connected directly. In this case the animal died in six minutes, and the examination again showed that the carbonic oxide was the immediate cause of death, proving that it was the most noxious constituent of the tobacco-smoke. The time

required to produce death in the last experiment was about one-fourth that required in the first and second.

This was probably due to the fact that in the latter the smoking was done more rapidly than in the preceding, owing to the lessened resistance in the apparatus, and the difficulty encountered in reducing the force of the aspirator. In each case, however, the amount smoked up to the time of death was about the same,—one and one-fourth cigarettes.

From these experiments the following conclusions are drawn:—1. That carbonic oxide is the most poisonous constituent of tobacco-smoke; 2. That more injury results from cigarette than cigar or pipe-smoking, because, as a rule, the smoke of the former is inhaled; 3. That cigarette-smoking without inhaling is no more injurious than pipe or cigar-smoking; 4. That the smoke of a cigar or pipe, if inhaled, is as injurious as cigarette-smoke inhaled; 5. That the smoke from a Turkish pipe, if inhaled, is as injurious as that of a cigarette inhaled.

THE BUSINESS OF LIFE.

THE New-Year time, with all its characteristic beginnings and new resolves, has a knack of suggesting to the scientific mind the process familiarly known in commercial circles as that of stock-taking. A very necessary process is that of noting the value of one's goods and chattels, and of ascertaining whether we are going forwards or sliding backwards in the life commercial. In the matter of the life physical, it is no less important a matter to discover whether we are doing well or doing only fairly, or even badly, with respect to the sheer business of living out our appointed ends. For living, it strikes me, is not only a business in itself, but a very important and grave piece of work, when all is said and done. How few of us, in the first place, can be said to live the perfect physical life, such as the sanitarian pictures in his dreams, visions, or even prophecies of the ideal existence? Contrariwise, how many of us live not only extravagantly, but recklessly and carelessly as well—in a physical sense, let me repeat. Numbers of us are perpetually overdrawing our account at the Bank of Life and Health (Limited,—very Limited, indeed); thousands are squandering their patrimony of strength and vitality with reckless hand: and thousands more, by compulsion of circumstances, are forced to make bad bargains in life's business, to struggle to make ends meet, and, alas! often give up business altogether, without joining the ends at all. On the whole, then, this great business of living in which we are all deeply engaged is a tolerably seasonable topic for a New-Year's lay-sermon. Even if one may not have anything that is very new or very original to record, he may, like preachers of another order, at least "improve the occasion."

Regarding the matter of making the most of our life physically as the all-important business in which we are engaged from birth to death, the justice of this assertion becomes plain when we reflect that to the healthy man most things are possible, while to the unhealthy individual most things are beyond reach. The common idea prevails that good health is largely a matter of chance; that you must take things as they come, and leave all questions of health and disease to the guidance of the modern medicine-man. Now, it is true, I admit, that for a certain amount of the health and disease we enjoy and suffer, we are not responsible. There is such a thing as heredity, and the inexorable handing down from one generation to another of legacies of physical unthrift and of bodily ailment. We are born into the world with that magical word "constitution" graven deeply in our frames, and written on skin and muscle, nerve and sinew, bone and brain. We have to live up to our constitutional peculiarities in some cases, just as we require to live them down in others; and we certainly do start life sometimes with a clean bill of health; at other times, sorely handicapped by reason of the follies and negligences of our predecessors. But beyond this plain declaration of how we may be started well, or fairly, or badly in the business of living, there yet lies the great commercial fact, that our own personal branch of the trade, as regards its making or marring, is largely in our own hands. We can build up a good business out of a feeble affair, or we can spoil the best of "going concerns," as the phrase runs. What we require first of all is to know how to conduct the affair to a successful issue, and to know the laws and rules which regulate the commercial transactions wherein we engage. And all this knowledge, I repeat, is not a matter of chance; it comes not by nature, and it is only to be learned and gained through diligent tuition in the practice of healthy living.

To descend from metaphor to practical details, I maintain that, with intelligent and increased attention paid to the laws of health, we should be able to save an immensity of pain, a large amount of money, and, above all, an incalculable number of lives. We are diligent enough in money-making pursuits, and we are all eager enough to woo pleasure and to walk in the green pastures and by the still waters of sweet contentment. But the great foundation of all pleasure, health itself, is not yet made a matter of even casual study by the people. They have still to learn that, as banking, or shoemaking, or bookbinding, or any other profession or trade, requires a training for its successful pursuit, so the business of being well and of keeping well needs study, demands knowledge, and requires patience and perseverance as the necessary conditions for building up life's forces to the end of a hale old age. The doctor's business is to fight disease; our business is to ward it off. His duty is to cure the ailment when it arrives; ours is that of keeping the ailment far from our doors. The business of health-study is not a difficult one, by any means. It involves the practical application to daily life of comparatively few and simple details. We want to know, first of all, about foods and drinks, and why temperance in all things,—the golden mean of the philosopher,—is the highway of successful living. We need to be taught a philosophy of clothes, that we may be wise enough to resist the foolishness of fashion and the commonplace errors of dress which everywhere abound. We require knowledge of the causes of disease,—how bad drains cause typhoid fever, and how typhus follows, like a dread Nemesis, on the footsteps of overcrowding and foul air. We want to know how the young are to be trained physically, and how the old are to be cared for so as to prolong the flickering of life's lamp in its feeble time. All this, and more, must we know before we may boast of being able to start successfully this great business of living well,—of doing well in life, not only for ourselves, but for others,—for our own house, and for "all sorts and conditions of men."

A wise reformer once remarked that there would be no difficulty incurred in teaching people to live wisely and well, provided always you explained to them intelligently the why and wherefore of your information. To teach the masses why cleanliness of body is a necessity for health, and why the bath is a *sine quâ non* of good living, it was urged, could only be effected if you made people understand that the skin is an organ perpetually engaged

EIGHT FIRST CLASS EXHIBITION AWARDS.

SCOTT'S For Infants, Children, and Persons of Weak Digestion.

MIDLOTHIAN

"Unequalled" OAT-FLOUR.

SOLE MAKERS—

A. & R. SCOTT, Limited, KINGSTON, GLASGOW; and 15a, FINSBURY-SQUARE, LONDON.

Export Agents—BOYACK & CO., 88, Bishopsgate-street, E.C.

SCOTT'S MIDLOTHIAN OAT-FLOUR.—There is no preparation which can be assimilated with greater facility than such a flour as this. Those who suffer from indigestion might substitute for their ordinary breakfast materials this flour, prepared according to the recipe given by Messrs. Scott, and printed on the tins.—**HEALTH.**

CHATTO & WINDUS'S CHEAP EDITIONS OF POPULAR NOVELS.

PICTURE COVERS, PRICE TWO SHILLINGS EACH.

By JAMES PAYN.
Lost Sir Massingberd
A Perfect Treasure
Bentinck's Tutor
Murphy's Master
A County Family
At Her Mercy
A Woman's Vengeance
Cecil's Tryst
Clyffards of Clyffe
The Family Scapegrace
Foster Brothers
Found Dead
Best of Husbands
Walter's Word
Halves
Fallen Fortunes
What He Cost Her
Humorous Stories
Gwendoline's Harvest
£200 Reward
Like Father, Like Son
Marine Residence
Married Beneath Him
Mirk Abbey
Not Wooed but Won
Less Black than We're Painted
By Proxy
Under One Roof
High Spirits
Carlyon's Year
A Confidential Agent
Some Private Views
From Exile
A Grape from a Thorn
For Cash Only
Kit: A Memory
The Canon's Ward
Talk of the Town
Holiday Tasks

By GEORGE AUGUSTUS SALA.
Gaslight and Daylight

By E. C. PRICE.
Valentia
Mrs. Lancaster's Rival
Gerald
The Foreigners

By CHARLES READE.
It is never Too Late to Mend
Hard Cash
Peg Woffington
Christie Johnstone
Griffith Gaunt
Put Yourself in His Place
The Double Marriage
Love Me Little, Love Me Long
Foul Play
The Cloister and the Hearth
The Course of True Love
Autobiography of a Thief
A Terrible Temptation
The Wandering Heir
A Simpleton
A Woman-Hater
Singleheart and Doubleface
Good Stories of Men and Other Animals
Readiana
The Jilt

By Mrs. J. H. RIDDELL.
Her Mother's Darling
Prince of Wales's Garden Party
Weird Stories
Fairy Water
The Uninhabited House
The Mystery in Palace Gardens

By F. W. ROBINSON.
Women are Strange
The Hands of Justice

By JAMES RUNCIMAN.
Skippers and Shellbacks
Grace Balmaign's Sweetheart
Schools and Scholars

By W. CLARK RUSSELL.
Round the Galley Fire
On the Fo'k'le Head
In the Middle Watch
A Voyage to the Cape

By BAYLE ST. JOHN.
A Levantine Family

By JOHN SAUNDERS.
Bound to the Wheel
One Against the World
Guy Waterman
Two Dreamers
The Lion in the Path

By KATHARINE SAUNDERS.
Joan Merryweather
Margaret and Elizabeth
The High Mills
Heart Salvage
Sebastian

By GEORGE R. SIMS.
Rogues and Vagabonds
The Ring o' Bells
Mary Jane's Memoirs
Mary Jane Married

By ARTHUR SKETCHLEY.
A Match in the Dark

By T. W. SPEIGHT.
The Mysteries of Heron Dyke
The Golden Hoop

By R. A. STERNDALE.
The Afghan Knife

By R. LOUIS STEVENSON.
New Arabian Nights
Prince Otto

By BERTHA THOMAS.
Cressida
Proud Maisie
The Violin Player

By W. MOY THOMAS.
A Fight for Life

By WALTER THORNBURY.
Tales for the Marines
Old Stories Re-told

By T. ADOLPHUS TROLLOPE.
Diamond Cut Diamond

By ANTHONY TROLLOPE.
The Way we Live Now
The American Senator
Frau Frohmann
Marion Fay
Kept in the Dark
Mr. Scarborough's Family
The Land-Leaguers
The Golden Lion of Granpere
John Caldigate

By F. ELEANOR TROLLOPE.
Like Ships upon the Sea
Anne Furness
Mabel's Progress

By J. T. TROWBRIDGE.
Farnell's Folly

By IVAN TURGENIEFF, &c.
Stories from Foreign Novelists

By MARK TWAIN.
Tom Sawyer
A Tramp Abroad
A Pleasure Trip on the Continent of Europe
The Stolen White Elephant
Huckleberry Finn
Life on the Mississippi
The Prince and the Pauper

By C. C. FRASER-TYTLER.
Mistress Judith

By J. S. WINTER.
Cavalry Life
Regimental Legends

By H. F. WOOD.
The Passenger from Scotland Yard

The above is a Selection only. The Complete List of nearly FOUR HUNDRED NOVELS will be sent free upon application.

LONDON: CHATTO & WINDUS, PICCADILLY, W.

DELIGHTFULLY PERFUMED BATHS.

USE

ORIENTAL AROMATIC SALTS.

FOR

BATH

AND

ALL TOILET

PURPOSES.

These Salts, possessing great hygienic properties, render the water very soft, and impart a most refreshing perfume.

The ORIENTAL AROMATIC SALTS are unrivalled for beautifying and preserving the skin, rendering it soft and velvet-like, and for keeping the complexion bright and clear.

To be had of all Chemists, Perfumers, and Stores.

SOLE PATENTEES:

S. TRAVADO & CO., 27, Jewry-st., London, E.C.

To be had also of Messrs. BREIDENBACH & CO., Perfumers to the Queen, 157b, NEW BOND-STREET, W.

LUNG TONIC

SAVE YOUR LIVES BY TAKING

OWBRIDGE'S LUNG TONIC

THE MIGHTY HEALER.

It has a power over disease hitherto unknown in Medicine.

Are you at all Weak-chested, or inclined to be Consumptive, with just a touch of Cough now and then?

"Try this Wonderful Medicine." The Cough and Weakness will disappear as if by magic, and you will feel a strength and power you never had before.

Have You a Cough?—A Dose Will Relieve It.

Have You a Cold?—A Dose at Bedtime Will Remove It.

Bronchitis and Asthma it relieves instantly.

The Spasms of Coughing so dreadful in Whooping Cough become less with each dose of the medicine.

"For seven weeks I was in exteme danger. I had quite lost my voice, and my cough, accompanied by great pain, was excessive, The first medical advice and all else that could be thought of was without avail. Strongly recommended to try it, as a last resource, I obtained a 2s. 9d. bottle of your Lung Tonic, which made a difference directly, and in a few days I was completely restored.—M. LAWSON, *Provision Dealer, Moxon-street, Hull.*"

Prepared by W. T. OWBRIDGE, *Chemist, Hull.*

Sold in Bottles, 1s. 1½d., 2s. 9d., 4s. 6d., and 11s., by all Chemists and Patent Medicine Vendors. Wholesale, all London and Provincial Houses.

Cotton, Silk, Merino, Underclothing, Shirts, Night-garments, Sheets, Counter-panes.

CELLULAR CLOTH.

THE HEALTHIEST AND BEST CLOTHING FOR ALL SEASONS AND CLIMATES.

"CLOTHED WITH AIR."

CELLULAR CLOTH.

WASHES WELL. UNSHRINKABLE. LIGHT. DURABLE.

Read the "Theory and Practice of Cellular Clothing," Post Free.

For List of Agents, Price Lists, and Press Opinions, apply to the CELLULAR CLOTHING COMPANY (LIMITED), 75, ALDERMANBURY, E.C.

A Complete Assortment of CELLULAR GARMENTS and Fabrics, on View at

OLIVER BROS.,

417, Oxford-street, W.

OLIVER BROS. will cut any length of cloth or send a Sample Garment post free to any address (on receipt of remittance), which will be exchanged or money returned if not approved of.

GLYCERINE—CODEIA JUJUBE,

WITH RED ORANGE JUICE,

A DELICIOUS AND EFFICACIOUS REMEDY FOR

THROAT IRRITATION AND DRY COUGH,

Gives great relief in Consumption and all Chest and Throat Affections.

Boxes, 1s. and 2s. 6d.; by post, 2 stamps extra.

TYLEE & CO., 7, BRIDGE-STREET, BATH.

ADVERTISEMENTS IN "HEALTH."

TARIFF PER INSERTION.

Whole Page	£5	5	0
Half Page	2	12	6
Quarter Page	1	6	6
Eighth of Page	0	13	6

Smaller Spaces *pro rata.*

OFFICE: 2, PATERNOSTER-SQUARE, LONDON, E.C.

OUR EYES.

JUST PUBLISHED, SIXTH EDITION, ELEVENTH THOUSAND,

Revised and Enlarged, with Three New Chapters, and Additional Illustrations.

OUR EYES, AND HOW TO PRESERVE THEM

FROM INFANCY TO OLD AGE.

With special information about Spectacles. By JOHN BROWNING, F.R.A.S., F.R.M.S., &c. With 58 Illustrations. Price 1s. cloth.

"This little book can do only good into whatever hands it finds its way. I only wish I could get it into the hands and heads of every schoolmaster in the kingdom, and so stop at its source an evil which is growing at such a portentous rate as to threaten to make us in another generation as short-sighted as the Germans."—*Truth.*

CHATTO & WINDUS, Piccadilly, London, W., and all Booksellers. Sent free for 1s. 2d. by the Author,

JOHN BROWNING, 15, KENSINGTON-CRESCENT, KENSINGTON-ROAD, W.; AND 63, STRAND, W.C.

ONE BOX OF CLARKE'S B41 PILLS

IS WARRANTED TO CURE

All ailments of the Urinary Organs (acquired or constitutional), Gravel, and Pains in the Back.

GUARANTEED FREE FROM MERCURY.

Sold in Boxes, 4s. 6d each, by all Chemists and Patent Medicine Vendors throughout the World; or sent to any address for sixty stamps by the Makers,

THE LINCOLN AND MIDLAND COUNTIES DRUG COMPANY, LINCOLN.

Wholesale Agents: BARCLAY & SONS, London, and all the Wholesale Houses.

in getting rid of part of the body's waste,—that it is really a kind of lung spread over the body, and that attention to its work is, therefore, a prime duty of us all. To impress on the minds of the people why ventilation is necessary, you must similarly teach them what lungs are, and what lungs do. These are the canons of health-science, and they are very plain, homely matters after all is said and done; yet, on such a basis depends the success of life in a physical and, I will add, in a mental sense also. So I would begin with the school, and make such plain teachings about the body and its life and work part and parcel of every child's education. Our children might have little Latin and less Greek, or they might not be able to construe a single sentence in French; but I should, at least, warrant their knowledge about fresh air and foul, about personal cleanliness, about disinfection, and other plain facts of health. True, there is no reason why we should not have the Latin and the Greek and the French also; but let us place a knowledge of this great business of living well first in the list of educational necessities. As Herbert Spencer says, it will not benefit a sorrowing mother who has lost her child through neglect of health-laws that she can read Dante in the original. Lastly, what we gain in the way of health in one generation is transmitted in a geometrical ratio to the next. This is the moral of my New Year's lay-sermon. We are not living for self alone when we live healthily. We are really living for everybody else in the sense that better health for us means duty ably performed, life made happier; while the good we ourselves experience is reflected upon our neighbours at large. That is not, by any means, a feeble result of our successful conduct of the business of life. And so, in the true meaning of the old salutation,—a health-greeting in its way,—I say, "Fare you well!"—*Dr. Andrew Wilson in the "Illustrated London News."*

SET a pitcher of water in the apartment, and in a few hours it will have absorbed nearly all the respired gases in the room, the air of which will have become purer, but the water utterly filthy. The colder the water the greater the capacity to contain these gases. At the ordinary temperature a pail of water will absorb a pint of carbonic acid gas and several pints of ammonia. The capacity is nearly doubled by reducing the water to the temperature of ice. Hence the water kept in the room awhile is unfit for use.

BURIAL REFORM ASSOCIATION AND CREMATION.—The council of the Burial Reform Association held its first monthly meeting this year in the Church House, Westminster, Canon Erskine Clarke in the chair. It was resolved to hold the monthly meetings in the Church House, Westminster, on the second Thursday in every month at four p.m. It was stated that the annual meeting would be in the Mansion House, London, under the presidency of the Lord Mayor of London, on Friday, May 3rd, at three p.m., and that the Bishops of London, Bedford, and Lichfield, Gen. the Hon. Sir Alexander Gordon, Lieut.-Gen. Sir G. Willis, K.C.B., the Master of the Charterhouse, and the Rev. W. H. Sewell will attend unless unavoidably prevented. Stress was laid upon the fact that cremation is quite beyond the province of the society, which was founded for no other reason than that of correcting prevalent burial abuses. Since the beginning of the New Year conferences have been held in the Town Halls of Leicester, Northampton, and Leeds, presided over in each case by the Mayor.

Public Health

"Health is the first Wealth."—*Emerson.*

PAPERS ON BURIAL AND CREMATION.

IV.—BURIAL REFORM.

By J. N. PARKER.

A GREAT evil connected with the disposal of the dead, and one which prevails to a large extent among the working classes, is keeping corpses unburied far too long. It was a common practice until recent years for a dead body to remain in a room for eight or nine days before interment, even in the summer months. One reason for this was because the immediate relatives of the deceased could not for about a week or so after the death raise the money for the funeral expenses. This difficulty has been greatly lessened during the last twenty years, as a greater proportion of these classes belong to burial and friendly societies, which provide an adequate sum for the funeral expenses of their members. It is even now a common practice to keep a corpse unburied for two days or so longer than it should be in the interests of the health of those who approach it.

It cannot be too well known, according to the statements of writers on medical jurisprudence, that if a dead body has been exposed to the atmosphere of a room of mean temperature (60 deg. F.) for about three days putrefaction generally commences, and the body emits a faint odour, which daily increases so that upon the fifth or sixth day it becomes very offensive. In a state of advanced decomposition the fœtid air exhaled from a corpse is so dangerous that if breathed in a concentrated state it is immediately fatal. Grave-diggers have died instantly from accidentally inhaling it in this condition, while slower deaths have occurred from exposure to corpse gas of a weaker kind.

In recognition of the danger of improperly prolonging the time for interment, it is rightly enacted by the Public Health Act 1875, that a mortuary may, and if required by the Local Government Board shall, be provided by any local authority for the reception of dead bodies within the district, and the local authority may make by-laws for the management and charges for the use of the mortuary. It is further empowered to provide for the decent and economical interment of any corpse that may be received into the mortuary, at costs to be fixed by the by-laws. When the body of a person who has died from any infectious disease is kept in an apartment wherein persons reside or sleep, or any corpse in such a condition as to endanger the health of the inmates in the same house or room is retained therein, a magistrate is empowered, on a certificate signed by a legally qualified practitioner, to order the body to be removed at the cost of the local authority to any mortuary provided for it, and direct the corpse to be interred within a specified time; and unless the relatives or friends undertake to bury the body within such limited time and do inter the corpse, the relieving officer is to bury it at the expense of the poor-rate, and the cost thus incurred may be recovered from any one lawfully liable to pay such.

It is to be feared that this part of the Public Health Act is not carried into effect according to the exigences of public health, whereby much illness befalls a great number of persons who visit or are in the vicinity of corpses. The use of wheeled biers has probably caused a considerable diminution of illness from which bearers

of coffins containing bodies in an advanced state of decomposition suffered, owing to the escape of effluvia therefrom. Among the upper and middle classes it is now happily the practice, in warm weather especially, not to keep a dead body above ground for more than four days, and this is often the case when corpses have to be transported long distances by railway, as they are conveyed by express and fast passenger trains. Dead bodies should be approached as little as possible after being unburied for more than four days in a temperature of 60 degs. F. and upward, and the apartments in which they are retained should be well ventilated, and the best disinfectants used.

Next to cremation, in the opinion of nearly all persons, by far the most important sanitary reform which has been advocated in the disposal of the dead is to inter corpses in very perishable coffins, termed by Mr. Seymour Haden the "earth-to-earth" system. The receptacles for dead bodies, he thinks, might be of wicker-ware lined with herbs, so that the corpse would be resolved into its earthly elements in about six years, so that we may bury again in the same ground, with no other effect than to increase its substance and to raise its surface. In the case of persons dying from infectious diseases, he is in favour of the use of charcoal in the coffin, instead of herbs. However bad the practice may be of preserving human remains in churchyards and cemeteries for ten, fifteen, or twenty years or more, according to the durability of the coffins in which they are encased, I think that if Mr. Haden's system were fully adopted in cemeteries having the most suitable soil for these burying-grounds, the effluvia from corpses and the pollution of wells and streams would be immensely increased, for the reasons I will state.

Of the burials in a large cemetery during each year the coffins vary very much as to their degrees of perishability; consequently, fœtid gases will only escape from a portion of them during any one year in the full strength or nearly so; but, from the use of the "earth-to-earth" system, the most forcible gaseous emanations from all the bodies buried during a particular year would vitiate the atmosphere during that time, and consist of several thousands more cubic feet daily than the effluvia that would issue from the corpses interred in coffins of different degrees of perishability. The poisonous air from crowded cemeteries in such event would soon become unendurable, both to those attending funerals and doing work therein, as well as to the inhabitants adjacent to them. Then again, the water which percolated from the soil would pass through so much additional decomposed flesh in the worst state of putrefaction, that wells and streams that were previously polluted by cemetery fluids might be contaminated to so much a greater degree that it would not be safe to use them for man or beast.

Some persons may be disposed to ask whether a body buried in the same spot where one has previously been interred and resolved into its component elements will also disappear as quickly from its bones as the first, and if so, whether a third, fourth, and subsequent corpses deposited in exactly the same place would do so. This question might be asked on the supposition that as virgin earth will grow better crops than it would a second time without being manured or drained, so new soil might have the power of more speedily reducing a corpse to its elements than earth used a second time for this purpose, and that the powers of a very limited cubic space of earth for this object would be weaker after each interment.

It is also doubtful whether the "earth-to-earth" system of burial in the case of persons who have died from infectious diseases would increase the dissemination of the germs of specific diseases according to the theory of Pasteur. Most of those who may be of opinion that the possible bad results mentioned, or some of them, may follow the use of the Hadenian method of interment, will, I believe, lose much of their respect for the sentimental opposition to cremation.

Now, while I am in favour of the discontinuance of burials in vaults and bricked graves, the cessation of overcrowding in cemeteries, and the dissolution of corpses into earth as quickly as possible, consistent with public health, I doubt at present whether the "earth-to-earth" system would answer this requirement as well as the construction of coffins which would perish more quickly than any now do in the aggregate, but of different degrees of perishability, so as to prevent that immense increase of effluvia from cemetery corpses to which I have referred. This modified Hadenism, as I may term it, would not prevent the realization of the wishes of those who desire to secure a grave plot of sufficient size to inter the remains of whole families for generations, as a corpse could be safely buried in the same ground in which another had been interred about twelve or fourteen years previously, provided the soil was most suited for a burial-ground.—*Sanitary Record.*

EELS IN WATER-MAINS.

IN our last report we referred to complaints which had been made of the presence of eels in the pipes of the East London Water Company, and to an inquiry which, at the instance of the West Ham Local Board, we had directed to be made on the subject. This inquiry was entrusted to General Scott, in conjunction with Mr. W. H. Power, one of our medical staff, and some useful and interesting information was elicited. It was shown that, for several years, eels had been from time to time found in the pipes, being sometimes discovered owing to the fouling of the supply by their decomposition, at other times owing to their interrupting the flow of water to particular taps.

Between April and December, 1886, there were thirty-two authenticated cases of this kind in West Ham; and though the company had tried on several occasions by specially flushing the mains and pumping the water to waste, to clear their pipes of the intruders, all efforts seemed to be unsuccessful in preventing the recurrence of what was a substantial inconvenience, and a possible danger to health. It had been supposed that eels had originally gained admission on the occasion of a collapse of a filter-bed in 1879, when a quantity of unfiltered water entered the mains. It was assumed that this water contained minute eels, and that these had bred and multiplied. There were several obvious objections to this theory. Even assuming that eels could find sufficient food in filtered water, it was evident that the rushing current of a main did not furnish a convenient spawning ground. Moreover, the eels appeared only in one part of the district into which the unfiltered water had penetrated, while the rest of that area was free from them.

Still, as no unfiltered water had entered since 1879, and as some of the eels were evidently less than seven years old, it was difficult to account for their presence otherwise than by the theory at first adopted. But two not very familiar facts in natural history had to be imported into the solution of the problem. In the first

place, it appears that eels are never known to spawn except in salt or brackish water, but every autumn the female eels descend to the estuaries in order to spawn, and every spring the elvers ascend the rivers. In the second place, both eels and elvers, when on their passage to and from the sea, frequently leave the water and cross any damp land that offers itself.

Now it happens that one of the reservoirs of the East London Company is partly encircled by the River Lee, and General Scott and Mr. Power came to the conclusion that the eels going down the river had left it at that point, possibly to avoid the foulness of its lower waters, had ascended the gently sloping turf which covers the reservoir, had then dropped down into the water through the apertures left for ventilation, and had subsequently made their way to the taps of the consumers. Details in support of this conclusion will be found in the report published in our Medical Officer's supplement to the present volume. If the assumption is correct, the difficulty will have been solved in a very simple fashion, for it was only necessary for the company to close the ventilating holes of their reservoir in order to prevent its recurrence. This step was taken by them shortly after the inquiry, and it is at any rate satisfactory to learn that no complaints of eels in the mains have since been received.—*Public Health.*

FUSSY WOMEN.—A fussy woman is bad at all times to endure, but in illness her fussiness is a cause of actual harm to the patient, and a source of more than usual discomfort to all with whom she comes into contact. Calmness can be attained, and is often attained, by most excitable temperaments, and that is the best calmness after all. A very strong nature that has so mastered itself as to be able to restrain all ill-placed display of emotion, and that can, while feeling very strongly, yet keep command of voice and manner, is a great comfort and support to those around. No fear of being taken for cold and unsympathetic; for, in spite of your quiet tone, low voice, and restrained manner, your sympathy and feeling will make themselves apparent; for, remember, real coldness and indifference to suffering is a thing to guard against.

Highest Award, Only Gold Medal, London, 1884.

GRANT'S SCOTCH OAT-FLOUR.

ESTABLISHED 1813.

CRAIG MILLS, DUNDEE.

"11, Mount Vernon-road, Liverpool.

"Being very much interested in the 'Food Question,' I buy all new things. Some are born only to die, others live out a useful life, and to this latter class Grant's Scotch Oat-Flour belongs. It is an admirable preparation of oats, giving all the nourishment without the roughness of oatmeal. Porridge, Puddings, Blanc-mange, and Biscuits are excellent made from it. I can, therefore, confidently recommend it to the healthy, because it will keep them in health; to the delicate invalid, because it will restore health; and to children, because it will lay the foundation of a sound and healthy life. To vegetarians it is invaluable. The ease with which it is prepared is by no means to be forgotten.

"ISABELLA THWAITES."

CHEMICAL LABORATORY.

MESSRS. R. R. TATLOCK & READMAN, INDIA BUILDINGS, EDINBURGH.—INSTRUCTION in Practical and Analytical Chemistry. Prospectus on application. The course qualifies for graduation in Medicine and Science of Edinburgh University. Water, Agriculture, Mineral and other samples received for Analysis.

Popular Science Papers

"Blessings on Science! When the Earth seemed old,
When Faith grew doting, and our reason cold,
'Twas she discovered that the world was young,
And taught a language to its lisping tongue."

—*Charles Mackay.*

A POSSIBLE REVOLUTION IN MEDICINE.

BY DR. AUSTIN FLINT.

MORE than 200 years ago (1675), Leeuwenhoek discovered what he called little animals, or animalcules, in "rain, well, sea, and snow water; as also in water wherein pepper had lain infused." These were microscopic generally, but of large size as compared with the objects now known as bacteria. The organisms seen by Leeuwenhoek were animalcules; the bacteria are vegetable growths. The rude and imperfect lenses used by Leeuwenhoek restricted his observations within very narrow limits, which were gradually extended as optical art advanced, following the construction of achromatic lenses, in the middle of the eighteenth century. The recent construction of homogeneous oil-immersion lenses, and the use of achromatic condensers, particularly those known as the Abbe condensers, have rendered possible the successful study of the more delicate forms of micro-organisms. Comparing recent discoveries in bacteriology, by means of perfected microscopical apparatus, with discoveries in astronomy by the use of the great telescopes, it seems that the small has the advantage over the great, at least so far as advances in knowledge have influenced the happiness and welfare of the human race.

The science and practice of medicine and surgery are undergoing a revolution of such magnitude and importance that its limits can hardly be conceived. Looking into the future in the light of recent discoveries, it does not seem impossible that a time may come when the cause of every infectious disease will be known; when all such diseases will be preventable or easily curable; when protection can be afforded against all diseases, such as scarlet fever, measles, yellow fever, whooping cough, &c., in which one attack secures immunity from subsequent contagion; when, in short, no constitutional disease will be incurable and such scourges as epidemics will be unknown. These results, indeed, may be but a small part of what will follow discoveries in bacteriology. The higher the plane of actual knowledge, the more extended is the horizon,—"*Plus on s'élève, plus l'horizon s'étend.*" What has been accomplished within the past ten years, as regards knowledge of the causes, prevention, and treatment of disease, far transcends what would have been regarded a quarter of a century ago as the wildest and most impossible speculation.

What, one may well inquire, has occurred within the past few years to justify expressions apparently so extravagant? Simply an unusually rapid evolution of knowledge from researches which at the time seemed of comparatively little pathological importance, such as Pasteur's experiments on the fermentations. Pasteur's discovery of the microbe which produces a peculiar disease in silk-worms, and especially the isolation of the microbe of the carbuncular disease of sheep, which sometimes attacks man, gave a powerful impulse to the study of bacteriology. It became evident that a complete separation of different forms of bacteria was a condition essential to their accurate study. It was also necessary

to ascertain the mode of multiplication of different bacteria. In the forms of micro-organisms that produce disease, called pathogenic, the characteristic disease is coincident with their presence in immense numbers in the body. The methods of investigation by which successful modern observations have been made were brought practically to their present degree of perfection by Koch. It seems to me that a brief description of these methods can hardly fail to be of general interest. In what is to follow, the disease-producing organisms will be called bacteria, microbes, or micro-organisms. These names, however, which will be used synonymously, embrace many forms that are not pathogenic.

In modern bacteriology, the first condition to secure is absolute sterilization of all the media and apparatus employed. This simply means destruction of all microbes present. The test-tubes and other glasses and instruments are heated to a temperature which will kill any germs that may be attached to them, and are carefully protected as they are allowed to become cool. The water used is sterilized by prolonged boiling. The nutrient substances in which the bacteria are to be cultivated are sterilized in a similar manner, but not by prolonged boiling, which would prevent the solidification of gelatiniform substances. The hands are not allowed to touch anything which it is necessary to keep free from contamination with extraneous bacteria. Finally, the air admitted to the cultures is filtered through sterilized cotton or some substance which will arrest any floating germs.

The next step is to prepare a medium in which the micro-organism which it is desired to cultivate will readily multiply. While this is easy, other micro-organisms will multiply as well; and the most difficult problem in bacteriology has been to separate the different microbes from one another, and to obtain what are known as pure cultures. A pure culture is a so-called colony of a single form of bacteria. If proper precautions have been taken, no extraneous micro-organisms are present in the apparatus used or in the culture-media; but in cultivating any one form of microbe, such as the bacteria of Asiatic cholera, other organisms invariably exist in the material from which the special form is to be obtained or isolated. An account of the attempts that have been made to isolate different forms of microbes, from the early experiments of Pasteur to the more successful efforts of Koch, would make a long chapter in the history of bacteriology, and would be out of place here; but the results of recent labours have laid the foundation of accurate knowledge of the relations of bacteria to certain diseases.

Koch prepared a gelatine, called "nutrient gelatine," possessing the properties of solidity and transparency. If a drop of fluid containing a number of different bacteria be diffused through this while the culture-medium is liquid, and the mixture be then solidified by cooling, each different microbe becomes isolated by a surrounding layer of gelatine, and from each one, by its multiplication, a colony is produced within a few hours, which can be recognized by means of a low magnifying power. From any one of these colonies microbes may be taken on a sterilized platinum wire, and "inoculated" upon a fresh culture-medium. A new colony will then be formed, and this process may be repeated. In this way an absolutely pure culture may be obtained. Nutrient gelatine is by no means the only culture-medium employed in bacteriological research. With some forms of bacteria, agar-agar (a substance resembling isinglass), prepared blood-serum, &c., present peculiarly favourable conditions for growth. The process of multication of bacteria is either by tranverse division or by spores, which latter are much more difficult to destroy than bacteria themselves.

Having obtained pure cultures of different bacteria from the blood, or from altered anatomical structures in any special disease, it is necessary to fix upon one form which is invariably present in that disease, and, if possible, to show that the disease may be produced by inoculation of a healthy animal with the isolated micro-organism. It has not been possible, up to this time, to obtain this absolute proof of the causative relation of certain bacteria to diseases. For example, no inferior animal has been found to be susceptible to typhoid fever; but a micro-organism, called the typhoid bacillus, is constantly found in the intestines in cases of typhoid fever, and in no other disease; and this is true of many other diseases due undoubtedly to bacteria. On the other hand, however, tuberculosis, relapsing fever, glanders, erysipelas, and certain diseases of the inferior animals have been produced by inoculation with pure cultures of bacteria found in these diseases and characteristic of them.

The excessively minute size of many bacteria, and the lines and shadows produced by the refraction of light as it passes through them, render it difficult, and in many instances impossible, to recognize them even under the most perfect illumination and with the best modern lenses. The old forms of dry objectives are almost useless in bacteriological investigations; but the homogeneous oil-immersion lenses, with the object illuminated by means of the Abbe condenser, suffice for the recognition of all known forms of bacteria after they have been treated with staining preparations. The perfection of the staining processes, which for some time had been used in anatomical research, is largely due to Koch. Without entering into a full description of the use of staining agents in bacteriology, it is sufficient to state that bacteria are distinguished from normal anatomical structures, first, by the greater resistance which the former present to the action of acids and alkalies; and, secondly, by the certainty and rapidity with which bacteria take up some of the aniline dyes. The resistance of bacteria to acids and alkalies renders it possible to decolourize other structures contained in microscopical preparations, leaving the stained bacteria practically intact. Thus, the staining of bacteria enables the observer to recognize them as bacteria. But different forms of micro-organisms behave differently in the presence of the same or different staining reagents. However, the aniline dyes enable one to distinguish all forms of bacteria from minute bodies with which unstained bacteria might be confounded.

From this summary account the reader can form an idea of what bacteria are and how they have been investigated. It is now almost universally admitted that they are vegetable, and not animal, organisms. The different forms are distinguishable from one another by their appearance under the microscope, their behaviour in the presence of staining reagents, their modes of multiplication, the time and manner of production of colonies from single germs placed in culture-media, and other characters which need not be enumerated. Within the few years that bacteria have been closely studied, immense numbers of micro-organisms have been discovered; but the larger proportion of these embraces organisms that are innocuous, and comparatively few have been recognized as pathogenic, or disease-producing.

(To be concluded.)

"HYGIENIC"

WOOLLEN UNDER-WEAR

For Ladies, Gentlemen, and Children.

Write for Illustrated Catalogue containing full particulars.

FORSYTH, Renfield-street, Glasgow.

Manufactured and Exhibited by us at the GLASGOW INTERNATIONAL EXHIBITION.

TOOTH-ACHE

CURED INSTANTLY BY

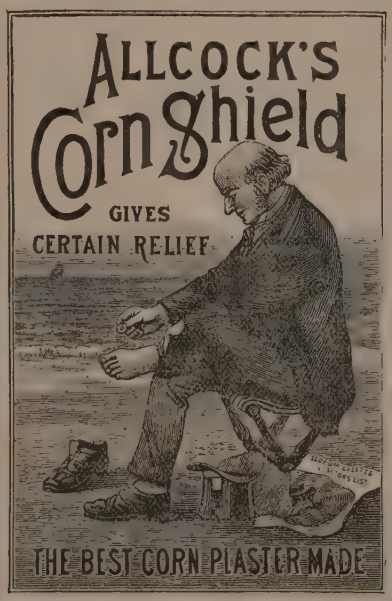
BUNTER'S NERVINE

Prevents Decay. Saves Extraction. Sleepless Nights Prevented. Neuralgic Head-aches and all Nerve Pains removed by Bunter's Nervine.
All Chemists, 1s. 1½d.

BUNTER'S DENTINE

Is the most Simple & Durable Stopping for Decayed Teeth.

One can easily prepare and place it in the cavity of the Tooth in a soft state, and in a few hours it becomes a perfectly hard and white Enamel, forming as it were a part of the original substance of the Tooth. All Chemists, 1s. 6d.



Order "HEALTH" from your Newsagent.

TERMS OF SUBSCRIPTION.

Yearly, including home postage, postage to the Continent, Canada, or the United States, 10s. 10d.; Six Months, 5s. 5d.; Three Months, 2s. 8½d.

Cheques and Post Office Orders to be made payable to the Publisher, A. P. WATT.

MEMORY. LOISETTE'S System of Memory Training. "Physiological and scientific in the highest degree."—Dr. Andrew Wilson. "The value of the fee returned to me twenty-fold."—Dr. Albert Carter (11th Nov., 1888). "Of great advantage to a strong memory; incalculable aid to a weak one."—Dr. J. M. Buckley. "Able to give the gist of any book after reading it once."—Rev. J. M. Macdonald, M.A. "Easily acquired and very interesting."—Rev. S. Bell, M.A. "Cure of mind wandering and increase of vocabulary."—J. Macgregor, M.A. "Top in examination."—T. Tait, M.A. Lessons by post or voice. Opinions of Mr. Proctor and of many members of the medical, &c., professions, Free.—A. LOISETTE, 57, New Oxford-street, London.

Indigestion—Constipation.

DAHL'S DYSPEPSIA CAKES.

Recommended by several Medical Men.

"You know what Mignonette means in the language of flowers, 'Your qualities exceed your charms.' This applies to the Cakes."—J. Milner Fothergill, M.D. In Boxes, 1s., 2s. 6d. Powdered Cakes, for delicate cases, 2s. 6d.

"THE CHILDREN'S BREAD"—Special Brand for Children, 2s.

OF ALL CHEMISTS.

DAHL'S AGENCY, 41, EASTCHEAP, LONDON.

In FLUID, POWDER, & SOAP.
Most Powerful, Lasting, and Non-Corrosive. Complete.

QUIBELL'S INFALLIBLE DISINFECTANTS.

Non-Poisonous.
Cheap and Effectual.
NEWARK, ENG.

SEVENTEEN GOLD, SILVER, & BRONZE MEDALS

WM. WOOLLAMS & CO.,

ORIGINAL MAKERS OF GUARANTEED

NON-ARSENICAL WALL PAPERS.

TO BE OBTAINED OF ALL DECORATORS.

Manufactory and Sole Address:

110, HIGH STREET
(Near Manchester-square),
LONDON, W.

NOTE TRADE MARK.

Thomson's COD LIVER OIL CREAM.

It is Invaluable as a Strengthening and Fattening Agent for DELICATE CHILDREN and INVALIDS generally.

Sample free. Bots., 2s. 3d., 4s., and 7s. 6d.; by post 3d. extra. Prepared by R. THOMSON, Chemist, 40, Dublin-street, Edinburgh.

London Agents: SANGER & SONS, 489, Oxford-st.

"FOR THE BLOOD IS THE LIFE."

CLARKE'S WORLD FAMED BLOOD MIXTURE.

Is warranted to cleanse the blood from all impurities, from *whatever* cause arising. For Scrofula, Scurvy, Eczema, Skin and Blood Diseases, and Sores of all kinds, its effects are marvellous. It is the only real specific for Gout and Rheumatic Pains, for it removes the *cause* from the blood and bones. Thousands of Testimonials. In bottles, 2s. 9d. and 11s. each, of all Chemists. Sent for 33 or 132 stamps by Proprietors,

THE LINCOLN AND MIDLAND COUNTIES DRUG COMPANY, LINCOLN.

BEWARE OF WORTHLESS IMITATIONS.

Works by Dr. ANDREW WILSON, F.R.S.E.

CHAPTERS ON EVOLUTION: A Popular History of Darwinian and Allied Theories of Development. Third Edition. Crown 8vo, cloth extra, with 259 Illustrations, 7s. 6d.

LEAVES FROM A NATURALIST'S NOTE-BOOK. Post 8vo, cloth limp, 2s. 6d.

LEISURE-TIME STUDIES, chiefly Biological. Third Edition, with New Preface Crown 8vo, cloth extra, with Illustrations, 6s.

STUDIES IN LIFE AND SENSE. With numerous Illustrations. Crown 8vo, cloth extra, 6s.

COMMON ACCIDENTS, AND HOW TO TREAT THEM. By DR. ANDREW WILSON and others. With numerous Illustrations. Crown 8vo, 1s.; cloth limp, 1s. 9d.

LONDON:
CHATTO & WINDUS, 214, Piccadilly, W.

VAN HOUTEN'S COCOA

EASILY DIGESTED—**PURE**—SOLUBLE—MADE INSTANTLY.

Incomparably THE BEST & MOST ECONOMICAL.

Very strong and nutritious,
THIS Cocoa is cheaper and more satisfying than tea.

"Admirable," "flavour perfect," "& so pure." } *BRITISH MEDICAL JOURNAL.* — *"Delicate aroma," "pure & unmixed," "goes a long way."* } *LANCET.*

"Its purity is beyond question." *"Once used, always used."—HEALTH.*

SAMPLE TINS GRATIS—through your Grocer or Chemist.

NOW READY.

CLOTH CASES FOR BINDING VOLUME XI.

OF

HEALTH.

PRICE TWO SHILLINGS.

INDEX FOR DITTO, PRICE TWOPENCE.

NOW READY VOLUME XI. OF

HEALTH.

Handsomely bound in cloth, price 7s. 6d.

Among hundreds of other interesting subjects treated in this Volume, Articles have appeared on the following —

DOES TOBACCO-SMOKING INJURE the EYESIGHT?
HOW TO CURE HEADACHES.
FASHION AND DEFORMITY IN THE FEET.
SHOULD WE SLEEP AFTER DINNER?
IS MODERATE DRINKING INJURIOUS?
THE USE OF ARSENIC BY WOMEN.
HOW TO TREAT WRINKLES.
EXECUTION BY ELECTRICITY.
A NEW FAT-CURE.
SLEEPLESSNESS AND ITS CURE.
HEALTHY MARRIAGE.
TIGHT-LACING IN EXCELSIS.

ALEXANDER P. WATT, 2, PATERNOSTER-SQUARE, LONDON, E.C.

The Family Circle

"The child is father of the man."—*Wordsworth.*
"In bringing up a child, think of its old age."—*Joubert.*

LUNG-EXPANSION AND CONSUMPTION.

DR. THOMAS J. MAYS, of Philadelphia, in a paper read before the Philadelphia County Medical Society, still further elaborates the theory which he has repeatedly expressed. This theory is, that an insufficient expansion of the lungs, especially of their apices, has more to do with the development of consumption than the breathing of impure air, and that, for the prevention of the disease, complete expansion of these organs is more important than the breathing of pure air. The title of his paper is "Apex-Expansion *versus* Pure Air in Pulmonary Consumption."

Although Dr. Mays acknowledges that wholesome air is of value in the prevention and treatment of consumption, still he is convinced that the purity of the atmosphere plays but a small part in the result. He cites the almost complete exemption from pulmonary consumption of the inhabitants of Iceland, Greenland, and Lapland, whose habitations are notoriously wanting in ventilation, as proof that this disease is not the result of breathing a vitiated and impure atmosphere. On the other hand, people living in tropical regions, who are out of doors most of the time, are by no means free from consumption. Miners and labourers in coal-mines, although continually respiring an atmosphere loaded with impurities, and damp and musty, suffer but very little from this disease.

That which has been an important factor in establishing the belief that pure air is such an essential element in limiting the ravages of consumption, is that those who occupy elevated or mountainous regions are less liable to this disease than those who live near the sea-level. In reference to this fact, Dr. Mays says that it is estimated that at an elevation of six thousand feet the surface of the body is relieved of nearly seven thousand pounds' pressure. When such an enormous weight is lifted from the body, it is quite evident that its interior must also be markedly affected: the pulse is accelerated from fifteen to twenty beats per minute; the respiration is quickened from ten to fifteen breaths per minute; and evaporation from the skin and lungs is increased. These are some of the immediate effects. Protracted residence in such a high region enlarges the chest-capacity. The Quichua Indians, who dwell on the elevated tablelands of Peru, have enormous-sized chests, containing capacious lungs with large air-cells. The Mexican Indians possess chests which are out of proportion to the sizes of the individuals. Dr. Denison says that children born in the Rocky Mountains have chests of unusually large capacity, and M. Jaccoud states that at St. Moritz the respirations are not only more frequent, but fuller.

The reason why the number of respirations increases while ascending a high elevation becomes clear when we take into consideration the fact that at the sea-level a cubic foot of dry air contains about 130 grains of oxygen, while at an elevation of six thousand feet it contains only about 106 grains—nearly twenty-five per cent less than the body is accustomed to breathe at or near the seaboard.

Professor Mosso has recently proven experimentally that man possesses a lung-capacity which is nearly one-fourth larger than the actual necessities of life at the sea-level demand; hence, by employing his whole lung-capacity, he can extract a sufficient amount of oxygen from this attenuated atmosphere without difficulty. And herein lies the secret why so many consumptives, and others with weak lungs, derive such a great benefit when they resort to a mountain climate. Every available space in the chest is brought into requisition to furnish the needed amount of oxygen, the apices are called out of their lethargic state, and the alveoli are inflated; and if the infiltrated areas are not dispersed, the surrounding alveoli are kept permeable, and so the disease is, at least, limited, and called into abeyance.

In concluding his paper, Dr. Mays says, "Now, after reviewing the whole subject, we are driven to the conclusion that the line of immunity from consumption, which in the early history of our county was located at the Atlantic seaboard, and which has gradually receded westward with the tide of civilization, until at present it has reached the latitude of Colorado, will not stop in its course until it touches the shores of the Pacific; that the question of curing the disease does not depend on the purity or freshness of the air, or upon the number of bacilli which the atmosphere may contain, or upon the amount of oxygen which may be introduced into the body, for these are all secondary considerations; but it is simply a mechanical question—a question as to the best mode of expanding the lungs, and especially the apices, of our round-shouldered and flat-chested patients; of removing the infiltrated products already existing; and of enhancing the constitutional resistance."

THE SANITARY INSTITUTE, Parkes Museum, 74a, Margaret-street, W.—At a meeting of the Council of this Institute, held 9th January, G. I. Symons, F.R.S., in the chair, it was decided to hold two courses of twelve Lectures for Sanitary Officers, the first course to commence in March, and the second in October. Sixty-four Members and Associates were added to the Register, and twenty applications read for election at the next meeting.

"SOOTHING POWDERS."—An infant, aged sixteen months, says a medical journal, is found to be ailing, and his mother of course (the expression is her own) gave him a "soothing powder," and of course (this time the expression is ours, not hers) this induced drowsiness, which persisted until the child's death. A *post-mortem* examination revealed nothing, and the inquest terminated in the usual verdict of death from misadventure, the jury being particularly unanimous that no one was to blame. It would be interesting to know how many times in the past ten years inquests have been held under similar circumstances; the information could be supplied from the Registrar-General's office if some member of Parliament would take the matter in hand. Juries always find that no blame attaches to any one, which is of course sheer nonsense. Most soothing powders contain morphine, and are therefore dangerous for infants; every person who gives one to an infant runs a risk, therefore, of poisoning that infant, and the more widely this undoubted fact can be made known the better. If one adult gives a poison to another adult, the plea that he did not know it was a poison would not necessarily save him from a charge of manslaughter, and there is no reason why the fact of the victim being a child should alter the case. Much might be said as to the responsibility of those who sell dangerous compounds without any or without sufficient warning to purchasers, and more still in respect of those who prepare them, but it will suffice for the present to call renewed public attention to the subject.

Jottings from the Journals

"Th' ingredients of health and long life are
Great temperance, open air,
Easy labour little care."—*Sir Philip Sydney.*

Rickets and Sanitation. — Our contemporary, the *Glasgow Herald*, has lately opened its columns to the subject of rickets from the point of view of sanitation. The question was raised in an able letter from Mr. James Thomson, who pointed out that rickets was of great prevalence in Glasgow, and who drew attention to what he considered the cause of the disease. He rejected, and wisely, the old notion that the soft waters of Loch Katrine were responsible for the deficiency in lime salts in the bones of the Glasgow infants, an idea which one would have imagined could hardly ever have been seriously put forward; and he went to the root of the matter by showing how the stress of the disease is chiefly on the poor, who suffer from it five times as much as the well-to-do, and that in all classes it is mainly attributable to dietetic mismanagement in early life, and the unwholesome surroundings in which so many children are brought up. The writer of the editorial, commenting upon Mr. Thomson's letter, owns, with much truth, that the dietary of the poor has considerably changed in modern times, particularly in the replacement of such wholesome articles as milk and butter and fresh meat, by tea and coffee, sugars, jams, tinned meats, and vegetables. It would almost seem as if the population of large towns has far outgrown the supplies of natural and necessary foods, which have become, therefore, more or less luxuries, and which have to be replaced by cheaper and less wholesome substitutes. But rickets is not a mere question of diet, great as is the influence of this upon the disease. It is influenced by the whole environment of the growing organism, and therefore we think that our contemporary is doing good service by making the prevalence of this disease the text of an appeal to the citizens of Glasgow for renewed efforts to improve the conditions under which so many thousands dwell.—*Lancet.*

✠ ✠ ✠

Quaint Cures.—From the marshy lands of Somersetshire, Cambridgeshire, and Lincolnshire comes many a quaint "cure" for ague and intermittent fevers, and I have been informed by a doctor friend who practised for some time in Lincolnshire that, although he induced his patients to take the remedies he prescribed for them, he found in many instances that they had at the same time applied to a "wise woman" to furnish them with "cures," which were as nasty as they were "strange." The worthy "fen folk" of Cambridgeshire consider that for a very mild attack of ague there is nothing so good as having two wooden balls strung together on a string round the neck of the patient, and knocked together once every hour "under the waistcoat, whilst repeating frivolous words;" but what these "frivolous words" may be is left to the patient's imagination apparently, for no special formula is given. For a quotidian ague it is advisable, say the "Zumerzet" yokels, to ask the vicar for a piece of communion bread, and after cutting it into three portions, to write on the first, "Oh, Ague, be worshipped;" on the second, "Oh, Sickness, to be ascribed to health and joys;" and on the third, "Pax,—max,—sax;" all three portions are then to be eaten fasting. This prescription is, doubtless, a remnant of some mediæval superstition, as also is, perhaps, that of tying two sticks together as a cross, and hanging them to the neck next the skin. In some of the marshy, low-lying lands of Kent many superstitious cures prevail even to this day. It is not so very long ago that a man in one of the small villages near Sevenoaks made quite a comfortable little income by the sale of a certain charm for the cure of ague. This consisted of a paper, on which were inscribed the following words, sewn into a tiny silk bag, and worn round the neck by a gaudy-coloured ribbon: "Wen Jesus saw the plais wair he was to be crusefyed he trembeled then sais the gues hunto him hast thou and hay gue. Jesus saith unto them hif hainey man ceap these woord he shal never be troubeled with hay gues Nor feavers sow the Lord help this thy servent that puts is trust in the." Some thirty years or more ago in Jamaica there were to be seen on the beach of Kingstown a certain breed of large hairless hounds, something like the pariah dogs of India in size and shape; their skin had all the appearance of india-rubber; they belonged to no one, and lived in a sort of community together, subsisting on any chance food they might pick up. The negroes and half-caste population entertained a firm belief that these dogs possessed some mysterious power of charming away yellow fever and ague, and they would accordingly stretch one of the dogs on the body of any person so afflicted, and the fever, as they imagined, then passed from the sufferer into the dog, though the latter was in no wise affected by the transmission. How this belief first originated it is impossible to say, and I do not know if it still prevails amongst "the dark population" of the island, but that it was universally prevalent at the period just mentioned, viz., thirty years ago, many contemporary writers and papers testify. — *Chemist and Druggist.*

✠ ✠ ✠

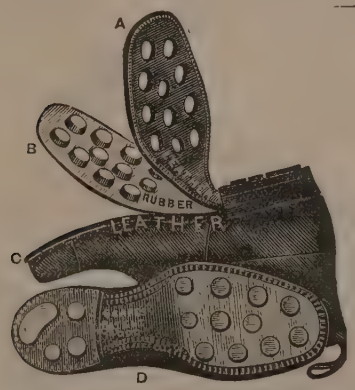
The Marriage of Near Kin.—There is a widespread idea that consanguineous unions produce either defective offspring or none at all. When a marriage between cousins is spoken of, sterility or a deaf-mute, idiotic, or deformed progeny is predicted, and examples are always at hand to cite in support of the prophecy. Does this opinion rest upon positive and well authenticated facts, or is it erroneous? This is a question that was examined a few years ago by Mr. G. H. Darwin, who, after a profound study of the subject, came to the conclusion that, in the present state of science, there is nothing to justify the common prejudice that exists against the marriage of near kin. More recently, the subject has been further examined by Mr. A. H. Huth, who has just published an exhaustive work upon it, in which he arrives at the same conclusions that Mr. Darwin did. Mr. Huth thinks that consanguinity of itself plays no particular *rôle* in the union of individuals of the same stock. In the descendants, it increases the tendencies common to the two progenitors. By reason of their relationship, the closer this is, and the closer the relationship of the ancestors, the greater is the tendency of the descendants to exhibit the same dispositions. If these are good, consanguineous unions will be advantageous, in that they will fortify and intensify them. If, on the contrary, they are bad, such unions should be avoided, in order to prevent a re-enforcement of unfavourable tendencies, which should be suppressed. But the case is identical where it is a question of unrelated persons. No reasonable person would urge two neuropathic individuals of different family to unite, because he knows that the neurosis has every chance to become intense in the descendants. On the contrary, a union between consanguineous individuals, equally healthy and well favoured, ought to be encouraged.

What may be urged against marriages of near kin is the facility with which unfavourable tendencies are transmitted, and the relative rarity of the circumstances in which such marriages can really be advised. But, this admitted and explained, consanguinity, of itself, presents no inconvenience, especially if we consider how remote, by reason of the existing laws upon marriage, is the degree of consanguinity between individuals capable of uniting legitimately. Upon the whole, consanguinity accumulates and intensifies tendencies. If these are bad, the marriage of near kin should be avoided; if good, it may be favoured. But as, unfortunately, the unfavourable tendencies are more easily and frequently transmitted, because they are the ones that are established with the most facility, there is oftener more reason for avoiding than seeking such unions. Upon the whole, Mr. Huth concludes that the accusations directed against marriages of near kin are not justified in the present state of science.—*Scientific American.*

IT is not common for us, perhaps, to look upon play as a means of development, and yet that is precisely what it must be to the child to whom it is an instinct. "This instinct," writes the New York *Medical Journal*, "is an inherent impelling force that causes all the muscles of the body and various faculties of the mind to be exercised in sufficient measure, but never in excess. It gives a large share of education and training, and prepares the young for future work." Growth is mere accumulation, while development is the cementing of all into a harmonious whole. But the education of play is never so complete as when it is directed by parents. "Companions educate more than the schools, and home more than companions. Shall we play with our children, or leave their voluntary activities to blind chance? Shall the dumb mothers exceed us in wisdom?" Surely here are privileges as sweet as they are necessary to the development that shall come on us as well as to the children in whose behalf we watch and wait.

Sanitary Appliances, Etc.

A REVOLUTION IN BOOT-MAKING.



A—Patent Perforated, Leather Sole. B—Patent Rubber Studded Middle-sole. C—Long Leather Middle-sole. D—Patent Combination Sole.

WHILE recently on a visit to Leeds, we received a courteous invitation to visit the factory of the Leather and Rubber Boot Company, situated in Albion-street of that city. Received by the presiding genius of the manufactory, Mr. L. E. Scafe, we were shown through the large premises occupied by busy workmen and by extensive machinery, much of which is of patent description, and specially constructed for the manufacture of the boots and shoes made by the Company. The special feature which Mr. Scafe has elaborated and successfully carried out to a practical issue in boot-manufacture consists in rendering the boot thoroughly warm, waterproof, and impervious to damp; while an easy and perfect fit,—the boot in all cases being modelled on hygienic principles to the foot,—is guaranteed. That to be "dry shod" is a primary maxim of health, is undeniable, and Mr. Scafe's patent, as will be seen from the illustration, is in itself as ingenious as it is effective.

LADY'S BOOT.

The "Combination" Boot has a leather middle sole, and also next to this a middle sole of rubber bearing a series of discs, which fit accurately into the perforated leather sole below. The appearance of the sole of the completed boot as shown at D is well depicted. The rubber discs project slightly beyond the leather sole, and upon these the wearer of the boot walks. In this way absolute immunity from damp is secured; the winter wear of such a boot is warm and free from dampness, while the summer wear is cool and pleasant. There is no slipping on ice when these boots are worn, and last, but by no means least, the durability of the "Combination" Boot is marvellous. We have inspected many testimonials from persons in all ranks of life with reference to these boots, and in these documents unvarying testimony of great durability and excellent wear is given. In itself, this is no slight recommendation, and one which renders these boots really economical articles of wear.

From a personal trial of Mr. Scafe's boots, we can speak with confidence of their merits. They are absolutely without fault, and in the course of many long and cold railway journeys,—a severe test of the qualities of a boot,—we have found them superior to all others in keeping the feet comfortably warm. For "all sorts and conditions of men" (and women) these boots are now being made. The golfer will especially appreciate them, and the sportsman,—whether in walking, shooting, yachting, or cycling,—will find the "Combination" Boots to be unrivalled for ease and comfort. One correspondent, referring to the "Combination" Boots, writes that "This rubber sole is actually impervious to damp under all conditions. We have had the boots subjected to severe tests. A journey of over a hundred miles on gravel roads made no appreciable impression on the soles, and after twelve hours in the wet grass the feet were as dry and comfortable as possible." For ladies' wear these boots are also being manufactured, and the lawn-tennis shoes will be found admirably adapted for the easy pursuit of that game. Their extreme lightness is a point in their favour, and one which alone should commend them to the notice of the fair sex.

We are pleased to be able to add a medical testimonial to the excellence of the "Combination" Boots; and to doctors accustomed to face the elements in all weathers these boots must prove a veritable boon. A medical man writes as follows:—"I have much pleasure in stating my opinion of the boots which you made for me a short time since. I have given them a fair and impartial trial, in wet and dry weather, on road and field, and I have no hesitation in saying that they are far and away the best boots I ever put upon my feet. They possess two great merits not common to ordinary boots: first, the extreme lightness combined with a boot that is at the same time absolutely waterproof; secondly, the wonderful springiness and elasticity of tread in a sole of such thickness, and the entire absence of any feeling of stiffness or weight. When walking,—even when new,—they are as comfortable as the lightest calf walking-boot; and for ease of wear I know nothing like them, my feet being always dry on the wettest ground. I sincerely wish Mr. Scafe's invention the success it deserves." The Royal Family, we understand, have recently given Mr. Scafe an extensive order for his boots.

If healthy boots and shoes mean those which keep the feet warm and dry, which fit the feet perfectly, and which can be worn for long periods without shrinking or cramping the feet, then we may assert that Mr. Scafe's patent "Combination" Boots have no equal in their own line as hygienic articles.

COLQUHOUN'S SCOTCH TWEEDS.

MR. A. COLQUHOUN, of Galashiels, N.B., sends us samples of the Tweeds he manufactures at the Eildon Mills of that famous centre of the Tweed industry. The distinctive features of Mr. Colquhoun's business are, firstly, that he manufactures all the

goods sold by him, and is thus enabled to guarantee their quality and wear; and secondly, that he sells direct to the consumer, and thus retails his goods direct to the public, saving the middle profit. Since first starting in business, some eight years ago, Mr. Colquhoun, we learn, has built up a very large and increasing trade, the public having found it largely to their advantage to deal directly with the manufacturer, and to obtain goods of first quality which their tailors can make into durable garments. The wool-grower also can hand to Mr. Colquhoun the raw material, and have it manufactured into Tweeds, shawls, blankets, rugs, and other articles. Through the introduction of special processes the Tweeds manufactured at Eildon Mills can be made impervious to wet; and this system of waterproofing is of a nature which, while it ensures dryness, does not interfere with the porosity of the fabric, and is thus free from the injurious properties of ordinary waterproofing which retains the skin secretions and favours chill and cold. The cost of this waterproofing process is small, being only threepence per yard.

An examination of the samples of Tweeds forwarded us by Mr. Colquhoun, show them to present every variety of pattern and make,—all being durable and of excellent quality. A box of patterns, with prices attached, is sent, carriage free, to all who may desire to select and buy their own materials for clothing. The Tweeds, it may be added, are all twenty-eight inches wide, and are warranted as being thoroughly shrunk. The experiment of purchasing direct from the maker is one which finds favour in the eyes of an increasing class; and there is every reason to suppose that Mr. Colquhoun's enterprise will be rewarded by still further and continuous increase of the business he has successfully founded.

DOIG'S "SEPTICIDE."

MR. A. DOIG, of 7, St. Paul's-churchyard, London, E.C., sends us samples of the "Septicide" Drops and Liniment prepared by him. These medicines contain no injurious substance such as would be likely to render their domestic use in any way dangerous, and, as family medicines, they may be used with safety in cases in which a stimulating lotion or liniment is needed, or in which an anti-spasmodic remedy is required.

NERVOUS EXHAUSTION.

PULVERMACHER'S World-Famed GALVANIC BELTS for the Cure of NERVOUS EXHAUSTION and DEBILITY, have received testimonials from three Physicians to Her Majesty the Queen, and the leading Physicians of nine London Hospitals, including over Forty Members of the Royal College of Physicians of London.

The distressing symptoms of NERVOUS EXHAUSTION and DEBILITY are speedily removed by means of **PULVERMACHER'S world-famed Galvanic Belts,** which are so arranged as to convey a continuous electric current direct to the affected parts, gradually stimulating and strengthening all the nerves and muscles, and speedily arresting all symptoms of waste and decay.

DR. H. A. ALLBUTT, M.R.C.P., 24, Park Square, Leeds, writes, Oct. 1888:—"I always recommend with confidence MR. PULVERMACHER'S BELTS. Ladies recovering from illness incidental to their sex will find these BELTS of vast assistance in restoring lost nerve power."

DR. C. HANDFIELD JONES, F.R.C.P., F.R.S., Physician to St. Mary's Hospital, says: "I am satisfied that MR. PULVERMACHER is an honest and earnest labourer in the field of science, and I think he deserves to meet with every encouragement from the profession and scientific men."

SIR CHARLES LOCOCK, Bart., M.D., says:—"PULVERMACHER'S BELTS are very effective in neuralgia and rheumatic affections, and I have prescribed them largely in my practice for other similar maladies, paralysis, &c."

For full Price List and particulars, see New Pamphlet, **"GALVANISM: Nature's Chief Restorer of Impaired Vital Energy."** Post Free from

PULVERMACHER'S
GALVANIC ESTABLISHMENT,
194, Regent-street, LONDON, W.
(Established over Forty Years.)

Our Letter-Box

"Conference [maketh] a ready man."—*Bacon.*

NOTICES TO CORRESPONDENTS.

All Communications for the Editorial Department (including Books for Review, Specimens of Sanitary Appliances, &c.), to be addressed to "THE EDITOR OF HEALTH," 2, PATERNOSTER-SQUARE, LONDON, E.C. *Those intended for the Publishing Office to be sent to* MR. A. P. WATT, THE PUBLISHER, *at the same address.*

RULES FOR CORRESPONDENTS.

OWING to the mass of letters which reaches us each week, we respectfully direct the attention of Correspondents, desiring replies in the LETTER-BOX DEPARTMENT of HEALTH, to the following rules:—

1. All questions are answered free of charge in the columns of HEALTH. A limited space only, is available for the insertion of replies each week.
2. All letters must be legibly addressed to "The Editor of HEALTH, 2, Paternoster-square, London, E.C.," *and to no other address.*
3. Questions to which answers are desired by post, are so replied to solely at the Editor's discretion. If no answer is sent by post, the query will be replied to in the "Letter-Box" columns of HEALTH. A stamped addressed envelope must accompany all queries to which a private reply is desired.
4. Addresses of physicians and surgeons will, as heretofore, be forwarded FREE to Correspondents on their enclosing a stamped addressed envelope for reply.
5. Correspondents are requested to write on one side of the paper only, and to make their inquiries as brief as may be consistent with clearness.
6. From the necessity of sending HEALTH to press early in the week, no Correspondent can be replied to in the "Letter-Box" columns in the same week in which the inquiry is received. Replies crushed out of any issue will be found in the succeeding number.
7. No Post Cards must be used in sending queries. Violation of this rule deprives the sender of the privilege of a reply.

QUERIES AND ANSWERS.

REPLIES: GENERAL, SANITARY, AND MEDICAL.

GRATEFUL.—We think you might give Horsford's Acid Phosphate a trial, if you find your present tonic ineffective; but we recommend you to avoid trying a variety of drugs, and to found your cure on the means we have already indicated to you. It may be, that your occupation is somewhat against you, in respect of the noise to which you allude. Take plenty of fresh air and exercise. Pulvermacher's Belts may assuredly be tried, if you are desirous of adopting electrical treatment.

J. MITCHELL.—You should avoid much vegetable food for a time, and take stale bread only, white boiled fish and meat soups, with a little butcher meat (well done) each day. When the flatulence troubles you, take five drops of Pure Terebene on a piece of sugar after meals. See, also, that you rest regularly after your meals. If not cured, write again.

C. PARK.—By means of a small syringe, inject a teaspoonful of pure (Price's) glycerine, either by itself or mixed with water. This is an excellent remedy for constipation. Try, also, Cascara, either in the shape of a liquid extract (twenty drops in water at night) or of Tabloids,—the latter very handy, and made by Burroughs, Wellcome & Co., Snow-hill-buildings, London, E.C. Let your diet be largely of vegetable nature. A tepid bath and massage to the abdomen each morning is also very useful in curing constipation.

BEN NEVIS.—You suffer from defective skin-action. Use the Oriental Aromatic Salts (advertised in our pages) with water for washing, as this preparation softens the water and stimulates the skin. Use Bayley's Spermaceti Soap, and employ a flesh-glove so as to stimulate the skin. Avoid excess of fatty foods.

G. E. A.—1. Forsyth's Woollen Underclothing, 17, Renfield-street, Glasgow, is that you should wear. 2. No; cycling is preferable.

A. H.—Your symptoms merely indicate lowness of tone. After your meals, take a dessert-spoonful of Scott's Pure Cod Oil Emulsion thrice daily, to brace up your system; and let us hear how you feel in a few weeks' time. Clothe warmly of course.

BENJY.—The trusses made by the Medical Battery Co., 52, Oxford-street, London, W., will suit your case. The hernia, however, should, in the case you name, be seen first of all by a surgeon.

W. M.—Many persons by constitution possess skins of the type you name; and they should protect themselves in cold weather by using some such preparation as Vinolia for the skin (Roberts & Co., 76, New Bond-street, London, W.), and by washing with soft water only,—see advice given to "Princeps" in the last number of HEALTH. In the case you name, during the cold weather, a dessertspoonful of Thomson's Cod Oil Cream should be taken after meals, as a nutritive and stimulant measure.

FRET.—You do not suffer from any ailment at all, and you require no tonics or drugs of any kind. Your doctor's opinion was perfectly correct. For what condition do you imagine you require an "operation"? Have you been reading some quack's lies? Take our advice, and simply live plainly, and take plenty of out-door exercise and a tepid sponge bath each morning. What you name is a sign of health, rather than one of debility.

C. P. S.—Howie's Filter, advertised in our pages, is one of the best that can be bought. It can be easily cleaned, an essential feature in all good filters.

L. W.—[Will you kindly attend in future to the "Rules for Correspondents," legibly printed each week at top of "Letter-Box" columns, and address your letter to the Editor, and not to the Publisher? Do you suppose the Publisher edits a journal?]—1. Try the effect of taking two Antipyrin Tabloids (Burroughs, Wellcome & Co.'s), twice daily, so long as the pain lasts. Take the Tabloids (five grains each) morning and night. 2. Shaving is the only sure process; otherwise you may try the applying to the moustache either of the lotions recommended to "Hairless" in HEALTH, No. 299.

MAURICE—The boils are only a consequence of the boy's general want of tone. Give him, after his meals each day, a dessertspoonful of Scott's Pure Cod Oil Emulsion with Hypophosphites, and see that he has plenty of nourishing food and open-air exercise. Give him strong soups and a liberal allowance of meat, while oatmeal or Grant's Oat Flour should be given him at least once a day. When his strength has been renewed in this way, all the symptoms you complain of will disappear.

TIRED.—You do not give us sufficient particulars of your health, diet, habits, &c. But as constipation is your chief complaint, and as you cannot be well until that is cured, you must follow strictly the advice given to "R. Paxton" in last week's HEALTH. Write again if not cured.

JOHN GUNSON.—We fail to see that you need any treatment at all. Simply live plainly and quietly, and take plenty of open-air exercise, and a cold (or tepid) sponge bath every morning. Take a little stout to your dinner, but avoid alcoholics altogether between meals. You have no necessity to use them otherwise; many "commercials" are total abstainers. If at any time you feel in need of a tonic, take the Syrup of the Hypophosphites as ordered in the pamphlet.

J. F.—[If you read our Rules for Correspondents you will see that you cannot receive a reply in these columns in the same week as that in which your letter is received. You evidently do not think that it takes time to print and publish a journal].—For the cure of scurf, rub a little glycerine of borax into the roots of your hair each night, and use a soft brush only. Continue to wash your head once a week with Bayley's Spermaceti Soap, and if not bettered, write again. Keep the hair very short for a time.

OLGA.—A good face-powder is made as follows:—Oxide of zinc, three drachms; powdered starch, three ounces; carmine, one drachm; otto of roses, four minims. The carmine may be omitted if desired.

G. C.—A hair-wash which is not greasy in its nature may be made as follows:—Glycerine, four ounces; tinct. cantharides, four drachms; liquor ammonia, four drachms; rose water, concd., two ounces; bay rum, ten ounces.

CINQUE.—Give a small cup of warm milk in the morning first thing, before rising, and give milk and soda through the day when the sickness continues. Let the food be taken sparingly as to quantity at each time. The rule, "little and often" is applicable to the food-habits of such a patient. Ask your druggist to procure some Ingluvin for you, and administer it as directed on the bottle.

EDWARD M.—Wash the feet frequently with Bayley's Soap and tepid water, and dust Woolley's Sanitary Rose Powder inside your socks thereafter. Look carefully also to the state of your boots and stockings, and wear roomy shoes.

M. M.—Castor-oil should be constantly applied to the wart for two to four or six weeks, once a day.

A. FRANCE.—Dr. Pavy's recipe for beef-tea is as follows:—Mince a pound of lean beef finely, and pour upon it into a jar one pint of cold water. Stir, and allow the mixture to stand for an hour. Then place the jar in a saucepan of water, and set the pan over a stove or gas-fire, and allow the water to boil gently for an hour. Remove the jar and pour its contents over a strainer. The beef-tea which runs through contains a fine sediment, to be drunk with the liquid, after being flavoured with salt.

NESTOR.—You do not suffer from any disease at all, and only quacks will tell you so. Read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and you will find full information in its pages.

ALPINUS.—Address your inquiry to Messrs. Burroughs, Wellcome & Co., Snow-hill-buildings, London, E.C. A simple remedy for your ailment would be an inhalation at bedtime of the steam arising from a pint of hot water to which Sanitas Oil has been added. It is also probable that you would benefit much from taking a dessertspoonful of Scott's Cod Oil Emulsion with Hypophosphites, thrice daily, after your meals.

PUDSEY.—Consult the advertising pages of the *Lancet* and *British Medical Journal*. You will find therein many advertisements of such retreats as would be suitable for such a case. We should prescribe entire abstinence from alcohol, rest in country air, with the use of bromide of potash, in twenty-grain doses, given in water, when the symptoms appear.

CATER.—You must allow an hour to elapse after breakfast before you go to your work. Try Dahl's Cakes regularly night and morning.

E. P. F.—The formula you seek for a hair-lotion adapted to promote growth is as follows:—Tincture of nux vomica, three drachms; distilled vinegar, two and a half ounces; tincture of capsicum, one drachm; tincture of cantharides, six drachms; spirits of rosemary, one ounce; rose water, to make up six ounces. Rub a little well into the roots of the hair each morning.

ALEXIS.—You should have your eyes thoroughly examined. Go to Mr. Browning, 63, Strand, W.C., and have your sight tested by him, as, in our opinion, you require suitable glasses.

SCRIBE.—Wash out the water-bottle thoroughly and frequently with a little Condy's Fluid added to tepid water; then afterwards scald the bottle with water as hot as it will bear. This will purify it thoroughly.

B. N. LUBBOCK.—The bill to which you refer was not issued by us, and had no reference whatever to HEALTH. Our weekly contents-bills are always plainly and legibly printed. You must have mistaken some other bill for ours.

J. S. B.—Apply to the French Hygienic Company, 6, Conduit-street, London, W., for a harmless hair-dye, and for advice on the points you name.

SPLENDENS.—1. Mr. Forsyth, of 13, Renfeld-street, Glasgow, will supply you with an estimate for the wool underclothing you require. 2. There is no such drug in the market.

JOHN B. RUSSELL.—For notice of La Bourboule and its medicinal qualities, see HEALTH for January 4th, 1889.

PRESTWICK.—The locality is not too cold for winter. You would be much more subject to risk on the east coast.

A DETECTIVE'S STORY.

"'Warner's SAFE Cure' has been the making of me," exclaimed Mr. Harry Williams, of 234, Lower-road, London, S.E. "Some two years ago my business, that of a detective, called me to the Isthmus of Panama, to hunt up a 'crook,' who had been 'doing' the English public. I caught my man in Aspinwall, after a three months' chase through Central America, and was about to return home with him, when I was attacked with Chagres fever. My symptoms were terrible. I had dull, aching pains in my head, limbs, and back; my appetite was wholly gone; I was completely saturated with mercurial poisoning; my skin was like saffron; and, in spite of all that the best physicians could do, I rapidly grew worse, and was taken to the hospital to die. Fortunately, a copy of the Panama *Star and Herald* fell into my hands, and in it I noticed a testimonial in favour of 'Warner's SAFE Cure.' I at once hired an attendant to get me a bottle, and commenced a course of it. The effect was like magic. Before I had finished the third bottle all the trouble appeared to have left me. My liver had discharged its superfluous bile, and brought my bowels into regular action; my skin 'wore off' its saffron hue and returned to its natural colour. The pains ceased, my appetite returned, I regained my strength, and was able in the course of a few weeks to continue my journey; and, in due time, handed my 'crook' over to the authorities, all through the means of 'Warner's SAFE Cure,' the greatest medicine on earth."

"Warner's SAFE Cure" can be had of all Chemists and Medicine Vendors in the United Kingdom at 4s. 6d. per bottle, or of H. H. Warner & Co., 86, Clerkenwell-road, London, E.C.

PARTNER.—May's Powders should be tried by you for your child. They are safe in every respect. The medicine you are now using is an opiate, and should on no account be given to any child.

OMEGA.—You probably suffer from a slight tendency to rheumatism. We should advise you to try the effect of bathing the affected part in hot water in which Tidman's Sea Salt has been dissolved. Take internally, when the pain is present, twenty grains of bromide of potash dissolved in a wineglass of water.

DON QUIXOTE.—1. Let your diet simply be of ordinary kind; in your case there is no need to make any special change. 2. By pastry we mean the ordinary run of tarts and like articles. You should not partake of sweets to any extent. 3. We should advise you simply to keep to the vinegar, and to follow out the instructions you have received. 4. If you are troubled with the thread worms, the best remedy is an injection of salt and water, or one of infusion of quassia. Take plenty of salt with your food, and be sure of the purity of the water you drink.

J. O.—There is no better remedy than the male fern for tape-worm. The following is the method of using the remedy:—Take no food for eight hours, then in the evening take the following draught: Extract of male fern, thirty minims; powdered gum acacia, one drachm; peppermint water, one ounce; make an emulsion. Next morning take a full dose of castor oil, and about midday a large plate of mashed potatoes. The minute head of the worm is the part which requires to be brought away. Repeat the treatment if symptoms of the worm should show themselves at a subsequent period. The specimen you send is a piece of a tape-worm.

A. SHEARER.—What you name is not of the least consequence, and need not alarm you in any way. We advise you to read the pamphlet, "A Lecture to Young Men" (post free, for 1s. 1d., from Mr. Renshaw, 356, Strand, London, W.C.), and note what is said therein about the proper guidance of your life with reference to such matters.

EREBUS.—The causes of psoriasis are of varied nature, and it is impossible to indicate them exactly without knowing the circumstances of each case. The best treatment seems to be that by means of chrysophanic acid. This is prescribed in the form of ointment in the proportion of one drachm of the acid to one ounce of lard. The ointment is to be vigorously rubbed into the affected spots, but, as it stains the clothes, the patient should sleep in the same sheets during the progress of the cure. Soap and warm water will remove the stains from the hands and clothes. In some cases in which this ointment has been used, it was applied to one side only, with the result that the whole disease disappeared, the other extremities being wrapped in cotton wool.

TWO YEARS' SUBSCRIBER.—The affection you name sometimes arises from the presence of small worms. Attend to this hint, and if there are any signs of this affection use the remedies above noted in reply to "Don Quixote." Otherwise, we advise you to try the application of pure Hazeline to the parts. Avoid the use of soap altogether for a time by way of experiment. If this treatment fails, then try an ointment composed of Lanolin, zinc oxide, and vaseline, of each, two drachms; resorcin, one drachm. Mix, and label, "Apply night and morning to the part." Write again if not cured.

Nervousness

Horsford's Acid Phosphate,

A NERVE FOOD.

Nervous diseases are often due to a diminution of the phosphates which exist in every fibre. The Acid Phosphate supplies the phosphates, and relieves nervous exhaustion.

Dr. C. J. DENNY, M.R.C.S., Blackwater, Hants, says: "I prescribed it in cases where the chief faults of health appeared to be want of nerve nutrition, with marked benefit."

Dr. SPENCER T. SMYTH, L.R.C.P., Forest-hill, Tyson-road, London, says:—"I have given it in nervous disorders where phosphoric acid is indicated, particularly in cases of nerve prostration, and find it a valuable remedy."

Descriptive Pamphlet post free on application to

Rumford Chemical Works, Providence, R.I., U.S.A.

Beware of Substitutes and Imitations.

Certain 'HARNESS' Cure.

ELECTROPATHIC BELT

FOR

SLEEPLESSNESS

SLEEPLESSNESS.—The Rt. Hon. LORD BYRON says that—"*Harness' Electropathic Belt is invaluable for sleeplessness, I recommend it to all my friends.*"

Guaranteed to generate a mild continuous current of Electricity, which speedily cures all Disorders of the Nerves, Stomach, Liver and Kidneys. Thousands of Testimonials. **Pamphlet & Advice free on application** to **Mr. C. B. Harness,** *Consulting Electrician,* the **Medical Battery Co. Ltd.**

Only Address,

52, OXFORD ST. LONDON, W. (*Corner of Rathbone Place.*)

Call to-day, if possible, or write at once

Easton's Syrup.

WHENEVER this Syrup is prescribed the best and purest Preparation should be taken. Made by J. SELLERS, Manufacturing Chemist, 57, Farringdon-road, London, E.C., who will forward either sized Bottle free by post for three extra stamps.

Sold in 4-oz. bottles, 1s. 6d.; 8-oz. bottles, 2s. 6d.

DOIG'S "Septicide" DROPS AND LINIMENT

KILL DISEASE IN EVERY FORM.

UNPARALLELED for Bronchitis, Diphtheria, Chest, Liver, and Kidney Complaints, Diarrhœa, Constipation Congestions, Rheumatism, Gout, Inflammations, Children's and Female Ailments, Fevers, Ulcers, Old Sores, Blood and Skin Diseases, Wounds, Pains, Bruises, &c., &c.

Of all Chemists, 1s. 1½d. per bottle; or post paid of the Proprietor, ALEXANDER DOIG, 7, St. Paul's Churchyard, London, E.C. Demonstrations Free from 10 to 4 daily.

STOP THAT COUGH

BEFORE IT REACHES THE LUNGS

By taking a small Bottle of

SCOTT'S EMULSION

IT WILL SURELY CURE YOUR COUGH AT ONCE,

and, unlike ordinary cough remedies, will strengthen and build up your system.

SCOTT'S EMULSION is a skilful combination of Cod Liver Oil with Hypophosphites, and the potency of these two tried and unequalled remedies has been increased threefold by their ingenious combination with Glycerine into this very palatable Emulsion.

SCOTT'S EMULSION will cure Consumption in its earlier stages without fail, and will surely relieve in the later stages and greatly prolong life.

FOR DELICATE, SICKLY CHILDREN, AND FOR EMACIATION,

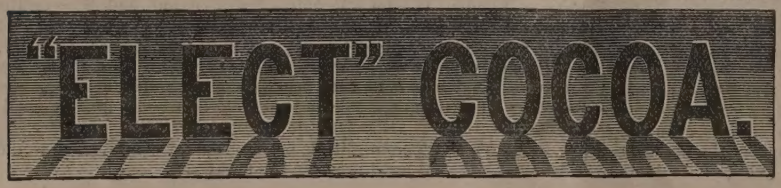
It will increase flesh and strength when all other remedies have failed.

SCOTT'S EMULSION of Cod Liver Oil with Hypophosphites is entirely deprived of the disagreeable taste of plain Cod Liver Oil and is much more effective.

Physicians prescribe it in preference to the plain oil, having seen its remarkable curative effects.

All Chemists, at 2s. 6d. and 4s. 6d.

ROWNTREE'S



The "**Hospital Gazette**" says:—"Among the advantages it possesses may be enumerated "the ease with which it may be prepared, and its agree "able flavour and aroma. In addition to these, it is, "when properly made, hardly thicker "than coffee, thus avoiding the dis- "advantage of some preparations which "are thick and muddy; this is produced "by the total absence of any thicken "ing matter. To sum up tersely, we "would say that everyone should elect "to use it."

YORK, ENGLAND.

SCOTCH TWEEDS

DIRECT FROM FACTORY.

If you want a really good ALL-WOOL SCOTCH TWEED, at Maker's Prices, in Worsted, Saxony, or Cheviot, *WRITE FOR PATTERNS.* All our own Manufacture. Any length cut. Splendid Selection. Tailors supplied with bunches of Patterns. Parties' own Wool made into Cloth. Heavy Tweeds, 1s. 9d. per yard; Light Tweeds, 1s. 2d. per yard. Blankets, Rugs, Winceys, Flannel, &c. Carriage of Wool paid, and Patterns sent free.

WOOL.

IMPORTANT NOTE.—All Wools sent to be made into Heavy Tweeds, Blankets, Crumbcloths, &c., &c., are made from two-ply yarns. This makes the Cloth finer and wear much longer than when it is done in the ordinary way. Cloth will be returned in One Month from receipt of Wool.

A. COLQUHOUN, Manufacturer,

GALASHIELS, SCOTLAND.

RESPECTABLE AGENTS WANTED IN EVERY DISTRICT NOT YET REPRESENTED.

EAU LODOÏS,

THE ONLY TRUE HAIR PROMOTER.

PERFECTLY HARMLESS.

FOR PARTICULARS APPLY TO THE

FRENCH HYGIENIC SOCIETY,

6, CONDUIT STREET, LONDON, W.

ESTABLISHED 1825.

NEAVE'S FOOD

FOR INFANTS, INVALIDS, AND THE AGED.

BEST AND CHEAPEST.

SODEN MINERAL PASTILLES.

TRADE MARK.

FOR THROAT IRRITATION COUGHS & COLDS.

SPECIALLY RECOMMENDED BY

"19, HARLEY STREET.

"I regard them as extremely valuable in *obstinate Catarrhal affections of the Throat.* "MORELL MACKENZIE, M.D."

"LORD KEANE has taken the Soden Mineral Pastilles when suffering from Catarrh of the Stomach. They *completely* cured him, and he can recommend them as the *best Lozenge for Coughs, Bronchitis,* and *Catarrh of the Stomach.*"

Of all Chemists at 1s. 1½d., or for 15 Stamps, from 10, DYERS'-BUILDINGS, HOLBORN.

Sir Morell Mackenzie

TRADE MARK

FOR BRONCHITIS ASTHMA & CATARRHAL AFFECTIONS.

WHOSE TESTIMONIAL IS WITH EACH BOX.

THE FOURTH EDITION NOW READY.

A

LECTURE TO YOUNG MEN

ON

"Purity of Life and the Preservation of Health."

BY A GRADUATE.

A complete Refutation of Quackery and a safe and reliable Guide, from the Medical standpoint, to all Young Men. Every Youth should read this pamphlet as a guide to the safe conduct of life in a moral and physical sense.

PRICE ONE SHILLING, or post-free 1s. 1d., from

HENRY RENSHAW, MEDICAL PUBLISHER, 356, STRAND, LONDON, W.C.

A WONDERFUL MEDICINE.

BEECHAM'S PILLS

BEECHAM'S PATENT PILLS. ST. HELENS LANCASHIRE

ARE universally admitted to be worth a Guinea a Box for Bilious and Nervous Disorders, such as Wind and Pain in the Stomach, Sick Headache, Giddiness, Fullness and Swelling after Meals, Dizziness and Drowsiness, Cold Chills, Flushings of Heat, Loss of Appetite, Shortness of Breath, Costiveness, Scurvy and Blotches on the Skin, Disturbed Sleep, Frightful Dreams, and all Nervous and Trembling Sensations, &c. The first dose will give relief in twenty minutes.

Every sufferer is earnestly invited to try one box of these Pills and they will be acknowledged to be

WORTH A GUINEA A BOX.

For females of all ages these Pills are invaluable, as a few doses of them carry off all humours, and bring about all that is required. No female should be without them. There is no medicine to be found equal to Beecham's Pills for removing any obstruction or irregularity of the system. If taken according to the directions given with each box they will soon restore females of all ages to sound and robust health. This has been proved by thousands who have tried them, and found the benefits which are ensured by their use.

For a Weak Stomach, Impaired Digestion, and all Disorders of the Liver, they act like magic, and a few doses will be found to work wonders on the most important organs in the human machine. They strengthen the whole muscular system, restore the long lost complexion, bring back the keen edge of appetite, and arouse into action with the rosebud of health the whole physical energy of the human frame. These are FACTS testified continually by members of all classes of society; and one of the best guarantees to the Nervous and Debilitated is, BEECHAM'S PILLS *have the Largest Sale of any Patent Medicine in the world.*

Prepared only and Sold Wholesale and Retail by the proprietor, THOMAS BEECHAM, St. Helens, Lancashire, in boxes at 1s. 1½d. and 2s. 9d. each.

Sold by all Druggists and Patent Medicine Dealers everywhere.

N.B.—Full directions are given with each box.

MADE WITH BOILING WATER.

EPPS'S

GRATEFUL—COMFORTING.

COCOA

MADE WITH BOILING MILK.

TOWLE'S

Pennyroyal & Steel Pills

FOR FEMALES

Quickly correct all irregularities and relieve the distressing symptoms so prevalent with the sex. Boxes, 1s. 1½d. and 2s. 9d., of all Chemists. Sent anywhere for 15 or 34 stamps, by

THE LINCOLN AND MIDLAND COUNTIES DRUG COMPANY, LINCOLN.

BEWARE OF IMITATIONS.

Great Discovery in the Preparing and Drying of Tea.

THE

UNIVERSAL DIGESTIVE TEA

Has received the approval of the Highest Medical Authorities in England.

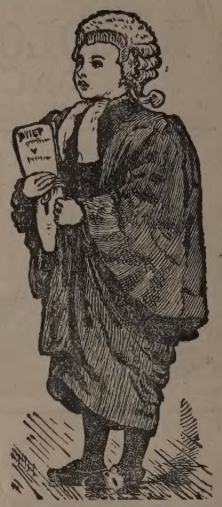
IT is recommended by Doctors and Physicians everywhere in preference to other Teas, especially for Nursing Mothers, Invalids, and Dyspeptics. By a patented process the Tannin is entirely neutralized, and the Injurious Oils are to a great extent extracted, while the fine delicate flavours are retained and developed to a degree impossible to obtain by the ordinary method of preparing Tea. It is also stronger and more economical. Try it for a week, and you will never willingly drink any other Tea.

By invitation, the "Universal Digestive Tea" was this year (1888) exhibited before the medical men attending the Glasgow meeting of the British Medical Association, and attracted great attention.

More than 500 medical men have already signified their approval of this Tea, and during the last three months over 9,000 samples of "Universal Digestive Tea" have been applied for by physicians and medical practitioners.

We are constantly receiving letters from persons who find they can enjoy our Tea, but dare not touch a cup of any other Tea.

We recommend the "Universal Digestive Tea" to all as a refreshing and delicate flavoured tea, which can be taken without risk, because the injurious tannin has been neutralized.



Sold in Packets only, 2s., 2s. 8d., and 3s. 4d. per lb.

ASK YOUR GROCER FOR IT.

N.B.—Customers living where no Agents are yet appointed will be supplied by Parcel Post on sending remittance (with postage) to

"THE UNIVERSAL DIGESTIVE TEA COMPANY," LIMITED, 64, CORPORATION-ST. MANCHESTER.

BAYLEY'S REMEDIES.

THE TRUE POMMADE DIVINE.

THE great usefulness of this excellent Remedy, the POMMADE DIVINE, is so well known to all who have ever applied it, that no Encomium is necessary, and to those who are yet unacquainted with its virtues, a trial in the following cases will be its best recommendation :—

It is good for all sorts of Pains, Swellings, and Bruises occasioned by Falls, or otherwise, and will prevent the many bad consequences of such Accidents.

For a Cancer before it is broke, and for all sorts of Sore Breasts, particularly in a Lying-In.

For Stiff Necks and for Swellings occasioned by the Evil.

For a Gangrene, melting a little in a wound, without using a tent.

For Pains in the Stomach, rubbed in before the fire.

If a little be well rubbed in for a few minutes on a Bruise or Pinch, it will prevent Blackness. Will also cure Scalds and Burns, applied directly ; and Rheumatic and Gouty Pains fixed in any part.

N.B.—No woollen of any kind should be applied to the parts affected, nor any metal (except silver) touch the Pommade. It will retain its virtues many years, and is therefore very useful to all Travellers, particularly Gentlemen of the Army and Navy.

HÆMORRHOIDS (or PILES).

As highly useful family medicines for that most distressing of complaints, Hæmorrhoids (or Piles), Bayley's Remedies have long enjoyed a high reputation. These remedies consist of specially prepared Pyrmont Tablets for invalid use, and of a Pyrmont Liniment for outward application. The tablets are compounded on the principle of the famous Pyrmont waters, which have been so highly recommended in cases of liver complaints, to the presence of which piles are often due, as well as in cases of the latter ailment itself. The liniment is made on allied principles. From an examination of these tablets and of the liniment, we are able to assert that they contain nothing calculated to produce untoward effects in the most delicate constitution, while they are likely to prove most beneficial in mild and severe cases alike. The ease with which the remedy may be taken—the tablets being agreeable to taste, and being merely allowed to dissolve in the mouth—will recommend this preparation in the eyes of those especially who have run the gamut of the many drugs employed for the cure of hæmorrhoids. We recommend a trial of Messrs. Bayley's Tablets, &c., which are to be obtained at 17, Cockspur-street, London, W.—*Vide* HEALTH, *April 8th*, 1887.

The Pure and well-known LAVENDER WATER and COLOGNE, as recommended by Dr. Andrew Wilson for the skin, cannot be too highly commended.

Prepared by BAYLEY & COMPY, Perfumers,

THE OLD CIVET CAT 17, COCKSPUR-STREET, LONDON.

PRICE LISTS FREE ON APPLICATION.

Printed for the Proprietor by HENDERSON, RAIT, & SPALDING, at 3 and 5, Marylebone-lane, Oxford-street, in the Parish of Marylebone, in the County of Middlesex, and Published by ALEXANDER P. WATT, at No. 2, Paternoster-square, London, E.C.